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USAID AGRO HORIZON PROJECT

YEAR THREE AND FOUR WORK PLAN

OCTOBER 1, 2016 – SEPTEMBER 30, 2018

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OCTOBER 1, 2016 – SEPTEMBER 30, 2018

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ABBREVIATIONS

ABSP	Agricultural Business Services Provider
APS	Annual Program Statement
AV	ACDI/VOCA
ASP	Agricultural Service Provider
BNF	Beneficiary Farmer
COP	Chief of Party
DCA	Development Credit Authority
DCOP	Deputy Chief of Party
DEC	Development Experience Clearinghouse
ECS	Environmental Compliance Specialist
EEU	Eurasian Economic Union
FGD	Focus Group Discussions
FY	Fiscal Year
GDA	Global Development Alliance
GDP	Gross Domestic Product
GIS	Geographic Information System
GOKR	Government of the Kyrgyz Republic
Ha	Hectare
HAACP	Hazard Analysis Critical Control Points
HH	Households
HICD	Human and Institutional Development
IDQA	Internal Data Quality Assessment
ISTA	International Seed Testing Association
KGS	Kyrgyz Som
KR	Kyrgyzstan
LEAP	Learning, Evaluation, Analysis Platform

LOP	Life of Project
M&E	Monitoring and Evaluation
MIS	Market Information Systems
MOA	Ministry of Agriculture
MSME	Micro-, Small- and Medium-sized Enterprises
MTS	Machinery and Tractor Stations
MT	Metric Tons
OA	Oasis Agro
ODC	Other Direct Costs
PIRS	Performance Indicators Reference Sheet
PPP	Public Private Partnership
PY	Project Year
R2	Second Reproduction
RAS	Rural Advisory Service
SME	Small- and Medium-sized Enterprise
SOW	Scope of Work
SPRING	Strengthening Partnerships, Results, and Innovations in Nutrition Globally
STTA	Short-term Technical Assistance
SWIS	Single Window Information Systems
SESW	State Enterprise Single Window Center for Foreign Trade
ToT	Training of Trainer
USAID	United States Agency for International Development
USD	United States Dollar
USG	United States Government
VC	Value Chain
WAEDS	Women Agro-Enterprise Development Specialist
ZOI	Zone of Influence

BACKGROUND

The USAID Agro Horizon Project promotes economic growth by increasing employment in the agricultural sector, especially for women and youth, while improving the availability of nutritious foods and increasing the market share of the targeted crops in both domestic and foreign markets. The Agro Horizon Project is a key component of USAID/Kyrgyz Republic (KR)'s overall economic development program designed to accelerate diversified and equitable economic growth in KR.

The geographic focus areas of Agro Horizon comprise the regions (oblasts) of Osh, Batken, and Jalalabad in southern Kyrgyzstan, and the Naryn region in the north. With a focus on these four regions, we engage actors in other locations that have market links to production in the target regions or the potential to strengthen competitiveness of the entire value chain for domestic or regional markets.

To sustainably reduce poverty and promote agricultural economic growth, Agro Horizon will:

1. Increase productivity of agricultural producers and link them to markets (Task 1)
2. Increase productivity and markets for agribusinesses (Task 2)
3. Improve enabling environment for agriculture sector growth (Task 3)
4. Improve nutritional status of women and children in the zone of influence (ZOI) (Task 4)

The Agro Horizon project's programming employs a market systems approach that is market-driven, private sector led, and promotes inclusive value chains development.

The Agro Horizon project is implemented by three partners: ACDI/VOCA, Helvetas and Associates for International Resources and Development (AIRD).

EXECUTIVE SUMMARY

The first two years of the project (FY15 & FY16) focused on increasing productivity of smallholder farmers of maize, potato, onions, apricots, and berries through the introduction of improved technology and good agricultural practices. Pruning and use of fertilizers and plant protection chemicals were introduced to apricot farmers in Batken. The project also worked on improving access to inputs, specifically, improved quality and variety of early potato seeds and fruit seedlings by supporting cooperatives involved in these businesses. It promoted access to machinery services by supporting increased capacity of machinery service providers. The project also established access to spraying (plant protection chemicals) by supporting a youth-owned and managed company with training, equipment and demonstration of these services.

Significant increases in incomes have been realized by farmers engaged in berry and early potato production. Maize farmers anticipate yields that are at least twice what they usually get, while apricot farmers expect at least 20 percent increase in their dry apricot yields.

Under its nutrition initiative, the project has made nutrient-dense food available to 1600 households through its kitchen garden program.

In the last two years of the project (FY17 & FY18), Agro Horizon will work to improve the livestock (meat and dairy), fruits, and vegetable value chains by developing each segment of the value chain as well as its support markets, such as the feed industry in the case of livestock and the fruit nursery business in the case of fruits.

Livestock is a sub-sector involving several value chains: cattle dairy value chain (including fresh milk), meat (cattle, poultry and small ruminants), live animals (cattle and small ruminants) and eggs. All these value chains are impacted by the feed industry. The project will work on the cattle dairy and meat value chains. Feeds has a critical function in developing competitiveness of these value chains. Meanwhile, feed ingredients such as maize, soybeans and fodder determine the competitiveness of feeds to a huge degree. The project will work on these critical components of the livestock market system that are important to the development of the cattle dairy and meat value chains.

In developing supply chains for open sourced products, the project will not focus on specific fruits. It will instead focus on developing logistics facilities for products traded through the same supply chain. For example, fresh apples, peaches, and various other fresh fruits and vegetables go through the same supply chain. However, dried products go through another supply chain. Hence, support to the development of the downstream side of the value chains will not be product specific, but will be based on gaps in the supply chain that when addressed, will boost the market pull for the agricultural products passing through that supply chain.

The project will carry out programming in partnership with private sector players such as SMEs and large companies engage in agribusinesses. Agro Horizon will focus on the following in the last two years of the project:

1. Expand markets for smallholder farmers by attracting investors to establish buyer platforms in the project's zone of influence. These buyer platforms will be in the form of processing, logistics, consolidation and similar facilities. Large buyers of raw materials are concentrated in the north, specifically, Chui Oblast. Agro Horizon will leverage the project fund to generate investment in the south and in Naryn.
2. Increase the productivity and expand the markets of processors and other agribusinesses already existing in the project's zone of influence through equipment, systems and human resource improvement and marketing support, including product development/diversification, packaging and branding.

3. Support productivity improvement at the farm level based on market requirements and ensure appropriate logistics and supply chain are established between farmers and buyers supported under Tasks 1 and 2 such that sustainable and strategic partnerships are promoted.
 - a. Support the establishment and capacity building of service providers that will offer responsive technical services in a business-oriented way.
 - b. Promote advisory/extension service provision that is less dependent on donors; and promote payment based on value-added results.
 - c. Promote embedded financing as a leverage for strategic partnership between farmers and buyer.
4. Work with lead firms that have demonstrated business capability in developing firm-based agricultural value chains that may or may not be within the livestock, fruits and vegetable value chains; the lead firm will provide co-investment in the development of the supply base and the processing or logistics facility, and will take responsibility for the marketing of the product.
5. Reduce barriers to access markets through market regulations and requirement awareness campaigns, product quality and production compliance to standards, and improved access to standards certification.
6. Promote women and youth participation in management of agribusinesses in its priority value chains through preferential support to women-/youth-owned and managed SMEs.
7. Focus on expanding outreach of its nutrition messaging in close collaboration with the SPRING project.

Below is a summary of what the project aims to achieve in this work plan from October 2016 to June 2018 and through LOP.

Table 1: Indicator Targets from October 2016 to June 2018

#	Indicator	Targets				
		FY15	FY16	FY17	FY18	LOP
1	Increase in daily per capita expenditures (as a proxy for income) in USG-assisted areas in %					25
2	Increase in Average Household Dietary Score (HDDS) in %					10
3	Number of households benefiting directly from USG assistance	4,904	9,606	35,029	46,759	71,494
4	Number of individuals trained	5,669	31,508	29,871	32,356	88,359
5	Number of private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and CBOs receiving USG assistance	225	40	74	73	344
6	Number of farmers and others who have applied improved technologies or management practices	3,200	32,030	19,282	29,687	65,835
7	Number of jobs attributed to project implementation	49	10	252	405	644
8	Gross margin- average increase per ha or per animal (%)	0	20	25	25	23
9	Value of incremental sales (farm-level) attributed to project implementation (US\$)	-	-	3,238,995	3,425,078	6,664,074
10	Increase in raw materials procured by SMEs assisted by the project (MT)	-	-	852,996	1,503,046	2,356,042
11	Value of incremental sales (enterprise-level) attributed to project implementation (US\$)	-	-	8,351,191	13,311,750	21,662,941
12	Value of new private sector investment in the agriculture sector or food chain (US\$)	-	-	2,967,000	396,000	3,363,000
13	Total increase in installed storage capacity (MT)	-	-	2,978	3,200	6,178
14	Increase in installed processing capacity (MT)	-	-	14,664	4,658	19,322
15	Number of MSMEs, including farmers, receiving USG assistance to access loans	-	-	9,625	11,437	21,062
16	Value of Financing Accessed by SMEs and farmers (US\$)	-	-	1,165,750	662,500	1,828,250
17	Number of public-private partnerships formed	-	-	55	30	85

TASK I INCREASE PRODUCTIVITY OF AGRICULTURAL PRODUCERS AND LINK THEM TO MARKETS

SUBTASK I.1 IMPROVE PRODUCTIVITY OF LIVESTOCK FARMING

Objectives

- Rural household expenditures (proxy for income) increased by 25 percent
- Increased market linkages for rural smallholders, with at least 80 percent of target farmer groups linked to at least one buyer
- Increased smallholder productivity in selected value chains, with 80 percent of target farmers using improved technologies/management practices
- Sustainable, pluralistic model for agricultural advisory services advanced, with farmers reporting increased use and quality of services

A. KEY ISSUES

A range of issues plague the livestock sector which result in low productivity. Many donors together with the government intervened to address some of the issues in the past decade. Significant progress was made, but efforts were not sufficient considering the enormity of the sector and the issues besetting it; livestock contributes close to 50 percent to the agricultural GDP of KR. With the time and resources the allotted the project, critical issues have been identified for intervention which have the potential to set significant changes in motion.

One major issue is the inadequate availability of affordable quality feed. The majority of farmers feed their animals minimally in winter until the next summer when they can graze in open pastures at low cost. Livestock is not considered a business, but rather a savings mechanism for emergency, social, or subsistence needs. The main problems with feed are low protein content of esparsette, lucerne and natural hay because of late harvesting, low productivity of produced fodder crops and subsequently low quantity of feed available in winter, especially in years with low precipitation. It is difficult for farmers and livestock advisors to estimate the quantity of feed to expect a certain gain in weight or milk production because of highly variable protein content and the absence of accessible laboratories to test feed. High costs of winter feed results in farmers selling fat, pastured animals in autumn at low prices due to oversupply of animals in the market.

Late harvesting of fodder crops is partly due to farmers' lack of knowledge and partly due to shortage of machinery services. Soybean production, which is a good protein source, remains limited and Kyrgyzstan continues to be dependent on soybean imports. Also availability of other protein sources is limited. Late harvesting due the shortage of mechanized services of lucerne and esparsette leads to deterioration of its protein content.

In FY16, Agro Horizon demonstrated that productivity of maize can be increased to more than 10MT/ha or double the current production, and cost can be reduced to as low as 5 KGS/kg. Other experiences show that productivity of other fodder crops can also be improved substantially with the right seeds and capacity building of farmers. Soybean production can be increased through buy-back schemes and educating farmers on its good economic performance compared to other crops. Fodder beet and preparation of silage are other feeds that can contribute to increased availability of quality feed.

Dairy processing companies in the ZOI face two crucial problems: in winter milk production is very low resulting in high prices that processors will not pay. Low winter milk supply is explained by the traditional animal keeping cycle in Kyrgyzstan. Almost all dairy cows calve in spring when there is plenty of grasses for the cow to provide milk for its calf. But this system means that during winter raw milk supply is very low, because the lactation period of the cows is coming to its end and most of the cows are not fed well in winter. Only few farmers have cows lactating in winter.

For dairy processors demand high quality milk throughout the year. In summer, most cows are grazed and milked on pastures, creating low milk quality due to insufficient refrigeration facilities to the processing locations. Further, manual milking leads to high prevalence of udder infections resulting in low productivity and bad quality milk.

The meat sector lacks modern slaughter houses. With Kyrgyzstan's accession to the EUU, meat processors must comply with strict technical regulations for food safety. In addition to compliant slaughterhouses, traceability of healthy animals from the farm to processing is required.

B. STRATEGY

Agro Horizon will focus on several critical areas to transformation the livestock sector. The project will increase productivity of livestock by

- increasing milk production in winter, and milk quality in the warmer seasons, and
- increasing live weight and quality of animals for meat production.

The project will work with private sector partners on

- improving availability of affordable quality livestock feed,
- adjusting lactation period of selected dairy cows so they produce milk during winter,
- establishing a traceability system from farm to meat processors,
- improving animal care and health management for milk and meat animals.

The project will partner with feed producers to develop better quality feeds to allow farmers to realize substantial profits. Agro Horizon has been working on the development of a GDA-type of partnership with Oasis Agro (OA), a company currently producing feed concentrates for chicken, but is very keen on diversifying to livestock feed. The project will also support the expansion of production of competitively priced feed ingredients such as soybeans, maize, alfalfa, fodder beets etc. through Oasis Agro and other partners.

The project will promote the increase of winter milk production by supporting farmers in changing the lactation period of dairy cows by inseminating them in early spring. For animals to be ready for artificial insemination they must be in good health and well fed during winter. Therefore, the project will identify suitable cows or heifers in August/September 2016 when they return from pastures. To encourage farmers to participate in the activity, the project will shoulder part of the cost of winter feeding. An important aspect will be to show that increased investments in feed for winter milk production are more than offset by the additional income from selling milk in winter. The feed rations for the selected animals will be

managed with special formula and feeding will be monitored. Also, their health will be closely monitored and treatment provided, if necessary.

Winter milk activities will be implemented by or in close collaboration with dairy processing enterprises as buyers of milk. The activity will concentrate in Osh and Naryn oblasts. Business partners will be supported in establishing livestock learning centers on leveraging arrangements, where small farmers will learn how to introduce winter milk production and how to feed and manage dairy cows in a way that results in high productivity and quality year round. Small-scale mechanized milking will also be demonstrated. If suitable partners (e.g. cooperatives, feed mills, feed distributors, milk collection centers, veterinarian entrepreneurs, processors or other commercial livestock enterprises) can be identified, similar learning centers may be established in other places.

To improve the quality of milk delivered to processors in the warm months, the project will support establishing collection points with cooling equipment operated by any one of the above-mentioned possible partners.

Oasis Agro will arrange professional level technical and business training for rural veterinarians. The project will support the development of a training module on advanced veterinarian know-how and a TOT by an international expert. Training on this module will be provided to veterinarians who participate in artificial insemination, livestock learning centers, feed sales points, milk collection points and the traceability mechanisms. The project will encourage service contracts between trained veterinarians and beneficiary farmers.

The Bishkek meat processing company, Toibos, plans to establish a slaughterhouse in Kochkor in Naryn oblast (with Agro Horizon support; see task 2). Together with Toibos, the project will support establishing a traceable supply chain of high quality animals to the slaughter house. The project will increase the availability of winter feed and facilitate cooperation with private veterinarians to support farmers delivering animals to slaughterhouses.

C. OBJECTIVES (LOP INDICATOR TARGETS)

Table 2: Indicator Targets for Livestock Value Chain

Indicator	FY 17 Target	FY 18 Target	FY 17 & 18 TOTAL
Number of rural HHs benefitting directly from USG assistance	4350	5050	5250
Number of individuals trained	1027	1966	1966
Number of Target Value Chain private enterprises assisted	9	10	16
No of farmers and others who have applied improved technologies or management practices as a result of USG assistance	4375	5075	5275
Number of jobs attributed to implementation	26	17	34

Increase in gross margin per kilogram of selected product (USD)	0.2	0.2	0.4
Value of incremental sales (collected at farm level)	1,737,882	1,085,000	2,822,882
Increase in volume of raw materials (MT) procured	13,002	7,420	20,422
Value of incremental sales (collected at enterprise-level)	2,465,000	4,370,000	6,835,000
Value of investment generated	437,000	-	437,000
Increase storage capacity (MT)	1358	3000	4358
Increase processing capacity (MT)	11,760	4430	16,190
Number of PPP established	5	1	6

D. ACTIVITIES, OUTPUTS, MILESTONES, AND TIMELINES

Activity 1.1.1 Improve feed industry

Sub Activity 1.1.1.1 Improve productivity of fodder crop cultivation

- Work with business partners to improve the productivity and protein content of lucerne and es-parsette hay and possibly introduce silage
- Expand soybean production in cooperation with the selected partners
- Link FY16 maize beneficiary farmers to buyers engaged in livestock value chains; expanded support will be based on the supply and demand gap as demonstrated by private sector interest in investment expansion

Sub Activity 1.1.1.2 Establish feed production and distribution structures

- Support agri-business partners to establish and upgrade feed production and distribution facilities
- Support the establishment of a feed testing laboratory

Activity 1.1.2 Improve productivity of milk farming especially during the winter

Sub Activity 1.1.2.1 Identification of farmers and cows/heifers for milk production in winter of 2017/18

Partner organizations (such as Oasis Agro and possibly TES Center) will identify farmers willing to participate in this initiative. One approach will be for them to work with the set of suppliers of dairy processors or collection point operators. The project will help partners identify other farmers in the vicinity willing to produce winter milk.

Sub Activity 1.1.2.2 Increase winter milk production

Partners are expected to carry out the following activities with support from the project.

- Assess feed base of typical groups of winter milk farmers (volumes and type of fodder production, harvesting, methods and equipment for preparation, sources of feed etc.) and feeding rations and year round practices

- Make recommendations to improve feed rations with a focus on winter and to explain to farmers the constraints of current rations and the importance of improved rations.
- Accompany proper feeding of identified cows/heifers for winter milk production from October 2016 until pasture season 2017
- Prepare identified cows/heifers for artificial insemination in February/March 2017 (higher feed rations, veterinary check and treatment)
- Support winter milk farmers in accessing adequate fodder and feed by linking to fodder and feed producers or supporting interested groups in improving own fodder and feed production, in particular rich, succulent feed for winter (fodder beet, silage)

Sub Activity 1.1.2.3 Improve cattle husbandry and health management

In addition to winter milk production, the project will improve the quality of milk supply to processors and other buyers including the summer period. This will be done through establishing livestock learning centers, improving animal keeping conditions (barns, access to water, electricity supply, location and microclimate), and training and consulting on improved dairy cattle husbandry, nutrition and health management.

Together with agri-business partners, training on proper milking methods and demonstration of mobile milking equipment will be carried out. Purchase of such equipment will be facilitated for interested farmers.

Activity 1.1.3 Establish traceability system for meat supply and improve meat farmers' productivity

Sub Activity 1.1.3.1 Support the development of raw material supply base for partner processor

Toibos that intends to set up a slaughterhouse with the capacity to slaughter ten animals per day. Assuming the plant operates for 260 days, it would support a supply volume of 2600 animals per year. The project will help build the supply base in partnership with entrepreneurs, e.g., traders or fatteners. This activity is linked with feed development.

Sub Activity 1.1.3.2 Set up traceability procedures

- Through an (international) STTA, design the procedures and record keeping forms for a system to trace animals from farm to slaughterhouse.
- Train farmers and other concerned stakeholders (veterinarians, staff of Toibos) to follow the traceability procedures and to keep tight records of relevant husbandry practices.

Table 3: GANTT Chart for Livestock Value Chain

#	Activities	FY16 Q4			FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
1.1.1	Improve feed industry																									
	Sign agreements with partner SMEs																									Agreements signed with at least two SMEs
	Procure equipment & other inputs, if any																									Equipment and inputs procured

	Identify producers and organize production																																					460 farmers enlist by Dec 2016 and an additional of 40 enlist by October 2017	
	Production operations																																					460 farmers producing fodder and other feed ingredients in FY17 and a total of 500 are producing in FY18.	
	Link feed producers to buyers/feed mills																																					Fodder producers are selling to feedmills	
1.1.2	Improve productivity of milk farming especially during winter																																						
	Sign agreements with partner SMEs																																				Agreements signed with at least three SMEs		
	Identify farmers and cows/heifers for winter milk production																																				250 farmers sign up by Oct 2016 and 200 more by Sept 2017		
	Accompany feeding of winter milk cows/heifers																																				400 cows prepared for insemination by Feb 2017 and 600 cows by Feb 2018		
	Artificial inseminate (AI) on of cows/heifers																																				400 cows receive AI by March 2017 and 600 cows receive AI by March 2018		
	Establish livestock learning centers																																				At least three learning centers established		
	Winter milk production																																				288,000 liters of additional milk is produced by 400 cows		
	Train and demonstrate proper milking																																				A total of 500 farmers trained		
	Establish milk collection points																																				10 collection points established		
1.1.3	Establish traceability system for meat supply and improve meat farmers' productivity																																						
	Sign agreements with partner SMEs																																				Agreements signed with SMEs:		
	Identify farmers / feed lot operators/fatteners																																				308 farmers sign supply contracts with Toibos		
	Hire STTA for traceability																																				STTA for traceability system is hired		
	Establish traceability system																																				Traceability system is in place - report by STTA		

[illegible]

E. RISK ANALYSIS AND MITIGATION PLAN

Table 4: Risk Analysis and Mitigation Plan Livestock Value Chain

No.	Activity	Deliverable	Risks	Mitigation measures	Responsible staff
1.1.1	Improve availability of affordable quality feed	Distribution system for feed	Farmers not willing to purchase OA feed.	Promotional campaign as part of customer development for improved feeds including video extension support.	Sabyr Toigonbaev
		Production of feed	Farmer groups/SMEs not ready or able to invest in machinery for harvesting fodder in time	Leverage Project Fund to buy down perceived risks and facilitate leasing arrangements Support farmers in organizing themselves for joint purchase and management.	
1.1.2	Improve productivity of milk farming especially in winter	Identify cows/heifers for winter milk	Not sufficient suitable heifers/cows for initiating winter milk	Encourage purchase of heifers from Issykul/Chui and facilitate access to financing	
		Shift lactation period of cows Produce winter milk	Farmers not ready to take risk of shifting to winter milk	For the start convert only 1-2 cows per farmer Subsidize feed in first winter before conversion	
		Improve keeping conditions	Farmers not willing or able to invest in adequate cow keeping conditions	Co-finance minimally needed improvements	
1.1.3	Establish traceability mechanisms and improve	Traceability system	Partner meat processing company does not have willingness and/or	Assist them in designing farmer support activities and training and contracting service businesses	Eleman Duishembiev

	meat produc- tivity		know-how to work with farmers		
	Improve meat produc- tivity		Partner meat pro- cessing company is not willing to take risks in investing in farmer capacity building	Leverage the Project Fund to buy down perceived risks and co-invest in farmer capacity building as part of grant agree- ment	
	Improve live- stock health management		Veterinarians do not have equipment re- quired for quality services	Provide small equipment grants to veterinarians serving benefi- ciary farmers	

SUBTASK 1.2 IMPROVE PRODUCTIVITY OF FRUIT FARMING

A. KEY ISSUES

Fruits and berries are an important income source for farmers in the southern oblasts of Kyrgyzstan, making up around 13 percent of all crop production value in the three oblasts of the south. The importance of fruits is highest in Batken with a 30 percent share in total crop production value, while in Osh and Jalalabad the shares are 9 and 8 percent respectively. 55 percent of apricots produced in KR come from Batken oblast – a volume of between 30,000 and 60,000 tons per year. An estimated 25 percent of all apricots are spoiled and unused. Around 70 percent of the apricots from Batken are dried (around 7000 tons dried apricots per year) Over 80 percent of dried apricots are exported. There is almost no processing (other than drying), such as juice or jam production in Batken. Around 24 percent of all apples in Kyrgyzstan are produced in Osh, 15 percent in Jalalabad, and 6 percent in Batken oblasts. The annual production of apples in the country is around 255,000 tons, of which around 45 percent in the south (115,000 tons). An estimated 260,000 households, approximately 130,000 farms, are growing apples in the south.

Around one third of all apples are spoiled and used for livestock feed, 27 percent of apples are consumed directly by households, 24 percent are going fresh to domestic and 12 percent to export markets in Russia and Kazakhstan, and 4 percent are processed to juice and puree.

Within the ZOI, prunes are economically important mainly in Aksy and Ala Buka rayons of Jalalabad oblasts.

There is a range of problems in the fruit sub-sector that are common to all fruit value chains:

- The market is fragmented and farmers have little choice on how to sell their produce
- Cool storage facilities for fresh and dried fruits are insufficient
- Future full enforcement of technical regulations for food safety and quality may put limitations to the export of fruits from Kyrgyzstan unless their food safety is improved
- On-tree fruits losses and post-harvest losses are high. A study estimates that for example one third of all apples are either spoiled or used as feed for livestock.
- Fungal diseases leave spots on the surface of fruit, affecting its appearance. Worm infestation (insect larvae) is common.

- Many farmers do not actively manage their fruit trees, believing that nature has too much influence on yield and income that it is not worth investing in improved management.
- Many orchards are old and are passed the point of high productivity.
- In some areas of Batken there is a shortage of irrigation water, particularly in dry years.
- The risk of heavy losses of apricots due to frost during flowering is high in many areas of Batken. This risk increases with altitude and most apricot trees in Batken rayon are at an altitude of around 1000 meters above sea level.
- The market for fruit saplings is largely uncontrolled and buyers have no proof of type or quality of what they buy.
- Poor primary processing and on-farm packing and storage practices of apricots and prunes result in low quality dried fruits that contain a lot of dust and dirt, and are infested with or highly susceptible to storage pests. Therefore, many of these dried fruits reach only the lowest grade market segment with correspondingly low prices.
- A substantial part of Kyrgyz dried fruits are sold to Tajik final processors and aggregators. Kyrgyz farmers feel that they would get a better price if they market their dried fruits themselves, but they find it difficult to build the required business relations because they are not organized. Where they are organized, lack understanding of markets and marketing strategies, business management skills, and connections to the Russian market.

In PYs 1 and 2, Agro Horizon engaged in fruit tree improvement with the following activities:

- Built the capacity of around 1500 farmers in Batken rayon in tree management and improved primary drying, coupled with initial efforts to facilitate more profitable marketing. In Year 2, interventions included training of independent trainers/field advisors and support to a private enterprise in establishing tree spraying services and training sprayer operators.
- In Year 1, capacity building for professional management of fruit nursery production in Batken, including the creation of a cooperative, and the establishment of certification of fruit saplings in collaboration with the responsible government bodies. In Year 2, the project started cooperation with two additional nursery cooperatives, one in Osh and the other one in Nookan (Jalalabad) with 100 nursery farmers each. These cooperatives in the on-going year will be supported with rootstocks and woodstocks from the Netherlands, motoblock cultivators, spraying equipment, and label printers. TOP Agro cooperative in Osh will get refrigeration equipment for their store.

B. STRATEGY

The project will work on the following fruit sub-value chains: apricots in Batken, apples with in Osh, and prunes in Jalalabad. The project will continue to improve productivity focusing on quality improvement that leads to increased sales value. Interventions will promote the application of key improved practices on orchards of farmers either by the farmers themselves or through fee-based services by commercial service providers.

The project will focus on promoting improved practices for existing orchards that are crucial for higher productivity:

1. Active tree management to reduce losses and ensure good fruit quality, including pruning, pest & disease management
2. Proper harvesting at the right maturity, as required by buyers
3. Improved primary drying for apricots and prunes and other post-harvest practices
4. Proper storage at the farm level

For activities such as aggregation, transport and other activities that occur outside the farm and are directly linked to downstream markets, see Task 2.

As experience shows, even the best practical training and coaching combined with demonstrations and subsidized inputs does not always result in better tree management, because farmers are not willing or able to conduct all tree management activities themselves. Projects and donor-financed advisory service providers may not select the right farmers for such training programs.

Therefore, at the center of the project's fruit strategy will be support to setting up orchard management service providers, aiming at the following outcomes:

- Businesses will provide services to farmers on a user-payment basis, which can be paid during harvest (in cash or in-kind) or up-front in cash. This approach anticipates fruit productivity to continue to rise beyond the LOP.
- Farmers' will achieve improved fruit productivity and quality as a result of access to and using the services of the orchard management service businesses

The support to these service providers also add an element to a pluralistic advisory and business service system with more user-paid services.

Such service businesses exist already in various forms. For example, the apple farmer cooperative Altyn Alma in Nookat has established and trained orchard management service brigades. Reportedly, fruit service providers operate in the major fruit growing area of Uch Korgon in Batken oblast. Tajik and some local Kyrgyz businessmen provide apricot harvesting and drying services in Batken. These can serve as models for such service businesses, but may also be supported in their further development.

Support to orchard management service providers could include, but may not be limited to the following:

- Develop a business plan including determination of service lines (e.g., service provision, embedded advisory services, aggregation, equipment rental, etc.) and pricing.
- Train and coach in technical knowledge and skills, service provision methods as well as in business management and marketing.
- Contribute to startup costs, e.g. in the form of co-financing of equipment and materials, or contributing to seed capital for a revolving fund.
- Support to develop marketing of services, e.g. client base development (mobilization of farmers), awareness campaign and development of extension materials, advertising, testimonial cases of farmers using improved practices, demonstrations of service provision, training in service marketing.
- Establish demonstration plots or small gardens (existing trees under improved management).

Through the Annual Program Statement and/or request for applications, the project will identify entrepreneurs interested in establishing or expanding a fruit service provision business. The services that these businesses intend to offer can be anything from design and planting new orchards, over pruning, year-round integrated or organic pest & disease management, harvesting and primary drying, and consolidation and storage. They may have a narrow service offering (e.g. tree management only) or a broad one (several or all of the above activities). They may offer different service packages to customer farmers such as complete practical services (e.g. pruning, spraying or harvesting and primary drying), or rental equipment (e.g. sprayers, secateurs) to farmers, or offer just consultations to those farmers who prefer to conduct fruit orchard management themselves. They may combine fruit services with selling of fertilizers, plant protection means or equipment. Substantial contribution to investment in the business from the service provider and a convincing business plan are a pre-condition for support.

Businesses intending to offer services to establish new orchards will connect with the three Agro Horizon-supported fruit nursery cooperatives, so they are able to advise their customers on where to buy reliable and high quality fruit saplings.

Farmers have to pay full cost for the services, whereby payment can be in any form acceptable for the service provider (in cash at once or in installments, or in kind, e.g. part of the harvest). In the first year the project will leverage the Project Fund to buy down perceived risks and encourage entrepreneurs to co-invest in the business. Profit-sharing arrangements, where payment for the services depends on the results, will be encouraged.

C. OBJECTIVES (LOP INDICATOR TARGETS)

Table 5: Indicator Targets for Fruit Value Chain

Indicator	FY 17 Target	FY 18 Target	FY 17 & 18 TOTAL
Number of rural HHs benefitting directly from USG assistance	8000	18,000	18,000
Number of individuals trained	8454	18,492	18,000
Number of Target Value Chain private enterprises assisted	13	20	33
Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	8454	16,586	16,680
Number of jobs attributed to implementation	86	239	325
Increase in gross margin per kilogram of selected product in USD	3.55	3.55	7.10
Value of incremental sales (collected at farm level) in USD	595,000	1,097,000	1,692,000
Increase in volume of raw materials (MT) procured	TBD	TBD	TBD
Value of incremental sales (collected at enterprise-level) in USD	1,090,736	2,278,000	3,368,736
Value of investment generated in USD	381,000	280,000	661,000
Number of PPP established	14	20	34

D. ACTIVITIES, OUTPUTS, MILESTONES, AND TIMELINES

Table 6: GANTT Chart for Fruit Value Chain

#	Activities	FY16 Q4			FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
1.2.1	Capacity building of fruit service providers																									
	Develop PPP agree- ments with service providers																									Agreements signed with SMEs: FY17 -5; FY18-2
	Business and service management training & business planning																									Service providers have business and market- ing plans
	Equipment procure- ment																									Equipment and inputs for orchard manage- ment procured
	Follow-on business coaching for service businesses																									Lesson are identified and marketing ap- proaches improved
1.2.2	Support development of client base																									
	Awareness raising and promotional activities																									Promotional activities carried out
	Service agreements between service busi- ness and clients																									8454 farmers in FY17 and 18,492 farmers in FY18 sign-up for ser- vices in orchard man- agement
1.2.3	Improve fruit tree management of farmers																									
	Technical training and coaching for service businesses																									Employees of Service Providers trained
	Service providers de- liver fruit management services																									8454 farmers in FY17 and 18,492 farmers in FY18 receive services on orchard manage- ment
1.2.4	Improve harvesting and post-harvest practices																									
	Training on post-har- vest handling and storage																									Farmers are trained on primary processing and proper storage
	Facilitate access to fi- nance for equipment and materials																									Farmers and/or farmer groups access financing
	Service businesses provide harvesting/ post-harvest services																									Farmers access post- harvest facilities of SMEs

E. RISK ANALYSIS AND MITIGATION PLAN

Table 7: Risk Analysis and Mitigation for Fruit Value Chain

No.	Activity	Deliverable	Risks	Mitigation measures	Responsible staff
1.2.1	Improve productivity of apricot farming	Paid services	Apricot service businesses are unable to find sufficient paying customers	Provide various forms of support to the service businesses in promoting and marketing their services	Ulan Jumanaliev
		Sustainable fruit service providers	Tajik aggregators have working capital and can pay to farmers immediately for the crop before it is harvested.	Facilitate access to working capital of post-harvest service providers	
				Negotiate with Tajik aggregators for a collaborative arrangement	
			Conflict with organic farmers	Ensure that service providers are aware of the buffer zones and observe the limits	
1.2.2	Improve productivity of apple farming	Sustainable fruit service providers	Age and condition of apple orchard is such that improved management will not lead to quickly visible benefits. Therefore, farmers may cease to use the apple management services after the first season.	Support to ASBs with marketing information will highlight that immediate benefits cannot be expected and show success stories of improved apple management	Azamat Mamytov
1.2.3	Improve productivity of prune management	Farmers sign-up for management of their trees	Farmers may not be interested in prune services and even less to pay for them.	We will support only a small number of prune service providers, and encourage them to offer a broader service menu including equipment rental, rather than only tree management services.	Sagyndyk Emilbek uulu
	Risks common to all fruit activities	Selection of fruit service businesses	Insufficient fruit service businesses that are willing or able to fulfil the project's co-financing requirements	Fall-back option – contract existing ASPs for farmer capacity building, but on an outcome (improved yield) instead of input (no. of trainings) payment basis	Ulan Jumanaliev; Sagyndyk Emilbek uulu; Azamat Mamytov

		User-paid services	Fruit service businesses are unable to find sufficient paying customers	Provide various forms of support to service businesses in promoting and marketing their services; encourage the service providers to engage in aggregation for integrated operation and profit sharing	Ulan Jumanaliev; Sagyndyk Emilbek uulu; Azamat Mamytov
		User-paid services	The strategy of other donors to distribute free inputs and free training and other services lets farmers think that “our” service providers are corrupt and want to get additional money although they get donor grants.	Issue all service providers with a letter from the project, in which all rules of the game are clearly explained	Ulan Jumanaliev; Sagyndyk Emilbek uulu; Azamat Mamytov

SUBTASK 1.3 IMPROVE BERRY PRODUCTIVITY

A. KEY ISSUES

In Kyrgyzstan, raspberry, strawberry, and blackcurrant are the main commercially produced berries. Commercial berry production is not very widespread, while raspberries are grown in many home gardens across the country. The annual production volume is estimated at 6000 tons of strawberries and 4000 tons of raspberries. Nearly 80 percent of strawberries and 65 percent of raspberries are produced in Chui oblast. The share in berry production of the southern oblasts is below 20 percent for raspberries and below 5 percent for strawberries. In Kadamjay rayon in Batken oblast, one Aiyl Okrug specializing in raspberry production is responsible for 10 percent of all raspberry production in the country.

An estimated 60 percent of all berries are home-processed, including households that do not grow berries themselves, 5 percent are industrially processed, and the rest is consumed fresh. Berry export from Kyrgyzstan jump-started in 2010. Somewhere between 15 and 25 percent of strawberries and a small proportion of raspberries are exported. Most of the berry exports go to Kazakhstan – partly to the fresh produce markets and partly to processing companies. The share of Kyrgyz berries in the Kazakh market is close to 90 percent. The profitability of berries is high in comparison to other cash crops. Strawberries are very labor intensive, mainly a women’s crop, and both types of berries are highly perishable.

Constraints to berry productivity are the following:

- Barely any specialized production of saplings for raspberries and runners for strawberries. Most farmers get planting materials from other farmers
- Lack of well-organized sales logistics
- Highly perishable thus requires cold chain
- Inadequate varieties and crop management practices result in low productivity and quality

B. STRATEGY

Agro Horizon's strategy for the berry value chain is buyer-led. The project will cooperate with commercial berry buyers. Attalyk, Contracting Centre, Lesnoy Product, Chyl, Farmers' Organic Garden are potential partners. Agro Horizon will support the buyers with co-financing of equipment and possibly capacity building support for logistics and processing (see Task 2). On the supply side, buyer companies will be responsible for:

- Identifying farmers already producing berries or ready to enter berry production
- Facilitating provision of the right quality and variety of runners or seedlings to beneficiaries
- Organizing production and provision of training and consultations to beneficiaries
- Organizing packing, collection, delivery to point of destination and other post-harvest logistics
- Marketing and sales of the berry

Decisions on how to perform these tasks are left to the partners. They may enter into agreements with advisory service organizations or employ or contract individual specialists, collectors and other helpers and pay them a certain amount per volume of delivered berries of the right quality. The project will assist them in arranging their preferred options.

C. OBJECTIVES (LOP INDICATOR TARGETS)

Table 8: Indicators for Berry Value Chain

Indicator	FY 17 Target	FY 18 Target	FY 17 & 18 TOTAL
Number of rural HHs benefitting directly from USG assistance	1000	1200	1200
Number of individuals trained	1048	1200	1200
Number of Target Value Chain private enterprises assisted	4	1	5
Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	1048	1201	1201
Number of jobs attributed to implementation	12	5	17
Increase in gross margin per kilogram of selected product in USD	0.35	0.35	0.70
Value of incremental sales (collected at farm level) in USD	100,000	120,000	220,000
Increase in volume of raw materials (MT) procured	900	1200	2100
Value of incremental sales (collected at enterprise-level) in USD	TBD	TBD	TBD
Value of investment generated in USD	300,000	-	300,000

Increase storage capacity (MT)	20	-	20
Increase processing capacity (MT)	200	-	200
Number of PPP established	1	-	1

D. ACTIVITIES, OUTPUTS, MILESTONES, AND TIMELINES

Activity 1.3.1 Agreement with buyer companies

Activity 1.3.2 Establish production base

Sub Activity 1.3.2.1 Identify farmers/producer groups (responsibility of the partner companies)

Sub Activity 1.3.2.2 Organize the right planting materials and inputs for new berry producers, if possible in autumn 2016

- Identify qualified runner and seedling producers and organize purchase of runners/seedlings by farmers (ensure compliance with USAID requirements)
- Determine other required inputs and organize purchase by farmers

Sub Activity 1.3.2.3 Organize production and provide consultations to farmers for production and harvesting (responsibility of the partner companies; they can sub-contract ASPs or independent specialists)

Sub Activity 1.3.2.4 Organize packing and delivery to processing facility, other processors and fresh market buyers (responsibility of the partner companies)

Table 9: GANTT Chart for Berry Value Chain

#	Activities	FY16 Q4			FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
1.3.1	Agreement with buyer companies																									
	Sign agreements																									At least two agreements signed
1.3.2	Establish production base																									
	Identify farmers																									At least 500 farmers enlisted by February 2017 and another 300 by February 2018
	Organize purchase of runners/seedlings																									Runners/seedlings for new farmers purchased
	Coaching for planting of seedlings/runners																									Runners/seedlings on of new farmers planted
	Organizing and coaching production																									At least 500 farmers in FY17 and 800 in

																		FY18 get a successful crop
	Organizing and coaching harvesting, packing and delivery to buyers																	Berries harvested and sold to processors and in fresh market

E. RISK ANALYSIS AND MITIGATION PLAN

Table 10: Risk Analysis and Mitigation Plan for Berry Value Chain

No.	Activity	Deliverable	Risks	Mitigation measures	Responsible staff
1.3.2	Establish production base	Delivery agreements between farmers and partner SME	If fresh berry market price is higher than what the buyers are willing to pay, the participating farmers are likely to break the delivery agreement and sell produce in the market	Advise the buyer to include as many farmers with as much area to produce twice as much berries as the buyers require	Eliza Yusupova
		Improve berry productivity	Partner buyers are not willing to pay enough for the organization of production and extension support to farmers. This will result in low level of support to farmers and low yields and quality, in particular with strawberries.	Support the partner buyers in designing farmer support and in contracting technical people/organizations to implement it. Facilitate negotiations between the partner buyers and capable service providers.	

SUBTASK 1.4 IMPROVING PRODUCTIVITY OF VEGETABLES AND POTATOES

A. KEY ISSUES

Vegetable farming, mainly tomato, cucumber, sweet pepper, onion and cabbage, is a fairly profitable business for farmers in Kyrgyzstan, especially in the south where early production is possible. Nevertheless, vegetable farmers are foregoing substantial profit potential because of a range of key issues:

- Yields are low because of the use of low-quality seeds and inadequate crop management practices
- Manual labor intensive
- Gluts in the main harvest season result in very low prices in some years

- Fragmented market with many intermediaries, which reduce farm gate prices

The production of vegetables and greens in greenhouses has quickly increased in recent years, and for committed farmers they offer a good income opportunity.

Potato is an important cash crop for farmers in the mountainous regions of KR and for early potato growers in the lowest areas of the country (such areas exist in Batken, Osh and Jalalabad oblasts). Apart from access to quality seed potatoes and the use of inadequate crop management practices, selling potatoes at a good price became increasingly problematic in recent years particularly for late potatoes.

Agro Horizon in Years 1 and 2 engaged in improving vegetable and potato productivity in various ways:

- Capacity building of over 1000 smallholder farmers – mainly women – in improved vegetable growing practices and in organizing sales in local market in a more profitable way (e.g. delivery agreements with processors, joint sales to fresh market, agreements with local organizations)
- Kitchen gardening for disadvantaged households in mountainous areas
- Building up of seed potato multiplication in Chong Alai in order to supply early potato producers in lowland areas with sufficient quality seed material
- Capacity building of early and main season ware potato growers

B. STRATEGY

For the remainder of the project, vegetable and potato will be treated as buyer-based value chains, i.e. the project will support activities only in partnership with enterprises ready to buy the produce. Several likely partners have already been identified.

The entrepreneur Avaz Abdurahimov intends to establish a french fry production of frozen potatoes and a consolidation center with grading, sorting and packaging facilities for potatoes and other vegetables, both in Osh with Agro Horizon support (see Task 2). With the aim to establish sustainable sales, the project will 1) support the production of the appropriate variety of potatoes for french fries and 2) link beneficiary ware potato producers with the consolidation center to improve incomes.

The company, Attalyk, intends to engage in garlic production and exports and to establish a logistics center for fruits and vegetables in Uzgen combined with a one-stop shop for inputs, machinery services and collection/buying of produce (see also task 2 and subtasks 1.1 on feed and 1.3 on berries).

A tomato processing company in Shamaldisai (Jalalabad) intends to engage in tomato paste production and the project will collaborate on delivery agreements and capacity building of farmer suppliers.

In addition, the project will support selected groups of beneficiaries from Year 2 home gardening activities to establish greenhouses and provide the necessary capacity building (for this we will establish or strengthen greenhouse service businesses – see 1.3) so they can earn additional income.

C. OBJECTIVES (LOP TARGETS)

Table 11: Indicator Targets for Vegetable and Potato Value Chain

Indicator	FY 17 Target	FY 18 Target	FY 17 & 18 TOTAL
Number of rural HHs benefitting directly from USG assistance	1500	2000	2000

Number of individuals trained	600	500	1100
Number of Target Value Chain private enterprises assisted	6	1	7
Number of farmers and others who have applied improved technologies or management practices as a result of USG assistance	618	521	1125
Number of jobs attributed to implementation	18	21	39
Increase in gross margin per kilogram of selected product in USD	TBD	TBD	TBD
Value of incremental sales (collected at farm level) in USD	150,000	130,000	280,000
Increase in volume of raw materials (MT) procured	3700	4810	8510
Value of incremental sales (collected at enterprise-level) in USD	TBD	TBD	TBD
Value of investment generated in USD	435,000	-	435,000
Increase storage capacity (MT)	500	-	500
Increase processing capacity (MT)	300	-	300
Number of PPP established	3	-	3

D. ACTIVITIES, OUTPUTS, MILESTONES, AND TIMELINES

Table 12: GANTT Chart for Vegetable and Potato Value Chain

#	Activities	FY16 Q4			FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
1.4.1	Production of potatoes for frozen french fries production																									
	Sign agreement with SME partner																									Agreement signed
	Determine availability of suitable seeds in the country																									Information on how many tons of what varieties documented
	If seeds are not available, import seeds																									USAID approval obtained & P.O. issued
	Devise and implement longer-term seed strategy																									Strategy available and seed potatoes are produced
	Facilitate contract growing agreements with farmers																									Contracts signed between SME and farmers

	Train and provide extension delivery support to farmers																						Farmers produce potato crops successfully
	Delivery to processing plant																						Farmers deliver right variety of potato to processor
1.4.2	Support garlic production for Atalyk company																						
	Facilitate contracts between Atalyk and farmers																						200 farmers sign contracts with Atalyk
	Training of farmers and land preparation																						200 farmers are trained on garlic production
	Consultations to garlic producing farmers																						200 farmers are producing successful garlic crop
1.4.3	Production of tomato for tomato paste production																						
	Sign agreement with partner SME																						Grant agreement signed between Project and SME partner
	Support development of supply base																						Contracts signed between farmers and processor
	Training and extension delivery support to farmers																						Farmers are successfully producing tomatoes for processor
	Organize delivery to processing company																						Processor submits report on procurement of tomatoes
1.4.4	Greenhouse farming																						
	Identify farmers																						Agreements with farmers
	Greenhouse types and sizes determination																						Appropriate greenhouse type and sizes identified
	Establish greenhouses																						17 greenhouses established
	Training of greenhouse farmers																						At least 50 farmers are producing vegetables in greenhouses
	Facilitate linkages between greenhouse farmers and buyers of greenhouse produce																						Farmers are linked to buyers and are selling their vegetables

E. RISK ANALYSIS AND MITIGATION PLAN

Table 13: Risk Analysis and Mitigation Plan for Vegetable and Potato Value Chain

No.	Activity	Deliverable	Risks	Mitigation measures	Responsible staff
1.4.1	Production of potatoes for frozen french fries production	Delivery agreements between farmers and partner SME	Right variety for frozen french fries not available in needed quantity in the country	Import R2 for production in FY17 Import Elite level for multiplication in FY17	Alinur Nyazov
		Delivery to processing plant	Delay in establishing frozen french fry factory, so that farmers have no buyer for the french fry variety	Identify buyer for produced french fry potatoes in other countries	
1.4.2	Support garlic production for Atalyk company	Delivery to buyer company	As a result of high market prices, farmers prefer to sell to fresh market	Support buyer in contract enforcement (if buyer provides seeds, contract breaking is unacceptable)	Alinur Nyazov
1.4.3	Production of tomato for tomato paste production	Delivery to buyer company	Processors and farmers price expectations don't match	Facilitate a clear price setting mechanism at the time of agreements with farmers. Facilitate agreement on prices at delivery time between buyer and farmers	Alinur Nyazov
1.4.4	Greenhouse farming	Identify greenhouse farmers	Failure to find women farmers/groups willing/able to co-finance greenhouses	Flexibility in setting co-financing shares particularly for all women groups or all-youth groups	Alinur Nyazov (South) Eleman Duishembiev (Naryn)
		Greenhouse farmers produce crop	Less than expected productivity due to learning curve	Extension delivery support will be part of the package	

SUBTASK 1.5 IMPROVING ACCESS TO FARM INPUTS

A. KEY ISSUES

Farmers face many barriers to accessing farm inputs and services in the ZOI. In Year 1 and 2, Agro Horizon addressed several of these barriers by providing support to:

- Improving fruit nursery practices
- Establishing seed potato multiplication in Chong Alai for early potato market in low-lying areas
- Establishing and providing capacity building of pesticide spraying services: the intervention addresses the unavailability of proper spraying equipment with farmers and their lack of awareness and understanding of safe use of pesticides
- Machinery-Technical Services (MTS) in acquiring selected machinery and to farmers for purchasing motoblocks (hand-operated cultivators)

Sustainable access to inputs is still an issue due to several reasons, including the lack of financial capacity of farmers to pay for these inputs long term, and lack of service providers, especially orchard management service providers. Further, seedlings of unknown variety and poor quality proliferate in the market.

B. STRATEGY

To address continuing access to input and service issues, the project will support certified production of fruit saplings with the three partner nursery farmer cooperatives Top Agro in Osh, Kench in Nookan and Arpasai Bereke Baghi in Kadamjay. The support will also include capacity building of service businesses for design and planting of new orchards with saplings, and for supply and installation of drip irrigation equipment to enable new orchards in water-scarce areas.

As discussed under sub-task 1.2, the project will support establishment of orchard management service providers who will embed fertilizers and plant protection chemicals in their services and allow flexible payment in terms of timing.

If there is interest from MTS, producer organizations or service businesses, the project will support the acquisition of motoblocks (push-cultivators) and other machinery for fruit and vegetable farming on a cost-sharing basis.

The project will continue to provide technical assistance and business advisory support to partner cooperative in Chong Alai for multiplication of early potato seeds.

C. TARGETS FOR FY17/18

Table 14: Indicator Targets for Improving Access to Farm Inputs

Indicator	FY 17 Target	FY 18 Target	Total FY17/18
Number of RURAL HHs BENEFITTING directly from USG assistance	4500	6600	6600
Number of Target Value Chain private ENTERPRISES ASSISTED	5	5	10
No of farmers and others who have APPLIED improved technologies or management practices as a result of USG assistance	4505	6000	6000
Number of JOBS ATTRIBUTED to implementation	5	-	5
Value of incremental sales (collected at enterprise-level)	TBD	TBD	TBD
Value of investment generated	390,000	-	390,000
Number of PPP established	3	-	3

D. ACTIVITIES, MILESTONES AND TIMELINES

Activity 1.5.1. Support to fruit nurseries towards supply of certified fruit seedlings

Activity 1.5.2. Improve access of farmers to machinery services

Support will be given to farmers involved in producing feed and fodder crops in order for them to access to machinery services within the framework of livestock value chain activities (see subtask 1.1).

Support will be given to fruit farmers in order for them to acquire machinery within the framework of the fruit value chain activities (see subtask 1.2).

Activity 1.5.3. Improve access to seed potatoes for early potato farmers

Table 15: GANTT Chart for Improving Access to Farm Inputs

#	Activities	FY16 Q4			FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
1.5.1	Support to fruit nurseries towards supply of certified fruit seedlings																									
	Jointly develop public private partnership with fruit nurseries to include establishment of certification system																									Grant agreements signed with three nurseries
	Implement activities included in the PPP agreement																									Certified fruit tree seedlings are being sold by the spring of 2018for sustainable operations beyond the project
1.5.2	Improve access of farmers to machinery services																									
	PPP agreement devel- opment with machin- ery service providers																									Agreements signed
	Processing of USAID approvals																									Appropriate USAID approvals obtained
	Procurement of equip- ment																									Equipment are deliv- ered to MTsS partners
	MTsS provides ser- vices																									Project beneficiaries utilize services of MTsS advisory
1.5.3	Improve access to early potato seeds																									
	Technical and busi- ness support to Chong Alai seed potato coop- erative																									Business plan ex- panded outreach and sales
	Marketing support to Chong Alai seed po- tato cooperative																									Marketing Plan for early seed potato

Note: Plan for activity 1.5.2 is included in sections 1.1 and 1.2

E. RISK ANALYSIS AND MITIGATION MEASURES

Table 16: Risk Analysis and Mitigation Plan for Improving Access to Farm Inputs

No.	Activity	Deliverable	Risks	Mitigation measures	Responsible staff
1.5.1	Support to fruit nurseries towards supply of certified fruit seedlings	Certified seedlings are being sold by nurseries	Internal conflicts within the cooperatives	Organizational strengthening support will be embedded in business advisory support	Azamat Mamytov
1.5.2	Improve access of farmers to machinery services	Machinery services provided to fodder crop farmers	Farmers are not interested or lack financial means to pay for services	Support client base development through awareness raising and facilitate flexible payment and access to finances	Azamat Mamytov
1.5.3	Improve access to early potato seeds	Early potato seed potatoes are sustainably available to farmers	Poor business management	Business advisory support	Azamat Mamytov

SUB-TASK 1.6 STRENGTHEN ADVISORY SERVICE INDUSTRY

A. KEY ISSUES

Kyrgyzstan's agricultural advisory service system involves several categories of service providers. The core of the system is non-profit specialized rural advisory service providers (ASPs), who serve farmers throughout the year. Pasture Management Committees and Water Users Association also provide some form of advisory services to pasture and water users. Private commercial enterprises, producer organizations, and the government are playing minor roles in the advisory service landscape.

Various studies show that the specialized ASPs are effective in supporting the productivity increase of farms. However, ASPs are heavily dependent on donor financing (>90%), and therefore not sustainable if donor financing is not available, which is a threat to long-term sustainability of access of farmers to extension delivery support or knowledge/skills transfer services.

Other key issues in the system are the following:

- Many specialists of the ASPs approach retirement age.
- The ASPs have limited know-how for supporting farmers in marketing their produce more profitably and for supporting "farming as a business" among farmers.
- ASPs cannot exist with providing knowledge services (training, consultations, information materials) only. The willingness to pay for knowledge services by private sector (farmers, processors, and other agriculture MSMEs) is weak. ASPs have been told for many years by donors that advisory service provision and agri-business should be separated. Further many of them are currently well engaged in donor projects, which reduces pressure for efforts to starting/planning business efforts.
- In Kyrgyzstan there are no public agricultural extension services. In the early 2000-years, the government agreed with several donors to go for a pluralistic, non-governmental extension system.

The government acknowledges the importance of extension services, but does not invest in them, as donors pour in lots of resources.

- The private commercial sector has so far been unwilling to invest substantially in capacity building of their raw material suppliers or customers buying their products. It may well be that the heavy use of ASPs by donors crowds out private sector investment in advisory services.

B. STRATEGY

As a way forward, the Agro Horizon project will enable the existing professional ASPs to set up business activities combining knowledge services with tangible technical services. Simultaneously, the project will build capacity for village level service businesses providing paid tangible technical services combined with extension delivery. Public investments in knowledge services to farmers will complement user-paid and donor-financed services.

Agro Horizon will develop the learning materials and service provider capacity required for the target value chains, and support selected efforts to strengthen the whole system of rural advisory and business services. Concretely, this means:

- Review existing extension materials on livestock and remaining crop topics and update or develop new standardized materials for the priority VCs. Include use of ICTs – mobile apps and videos. Videos will be produced for priority value chains where none exist, e.g., winter milk, live-stock feeding, fattening for meat, apple and prune management, potato production, vegetable gardening, onion and hybrid maize.
- Support the establishment and capacity building of technical service businesses such as for example fruit tree care services or apricot harvesting and primary drying, and innovative business models combining knowledge and technical services, with special attention to involving young people. We expect to train at least 100 individuals each in Years 3 and 4.
- Work with MOALRPI on developing a strategy or policy concept for extension services (in collaboration with Task 3). Build capacity for managing public AS procurement on VC-related topics determined by the government (municipality, rayon, oblast and/or country level).¹
- Support ASP capacity upgrading in key issues for target VCs, marketing/farming as a business, simple traceability and quality management mechanisms, and EEU requirements for fresh product exports. At least eight ASPs will be participating in these activities.

Advisory service system coordination mechanisms can only have good sustainability perspectives if they are truly owned by the stakeholders; earlier donor-initiated efforts proved to be fairly short-lived. The project will therefore assist in improving advisory service system coordination. For example, through the (re-)establishment of an advisory service industry association or other advisory service coordination mechanism; setting up or preparing for a certification, accreditation or other quality control mechanism for advisory services; and/or establishing a unified advisory information platform if ASPs or the government take the initiative and request assistance and are willing to take a very active role in implementation.

C. ACTIVITIES, MILESTONES AND TIMELINES

Activity 1.6.I Establish and build capacity for innovative technical and advisory service businesses

The establishment and capacity building for service businesses for livestock and fruit value chains is integrated in the respective plans. Through the Annual Program Statement or Request for Expression of Interest (ROI), the Project will encourage further ideas for such models for other target value chains.

¹ Only upon on reinstatement of bilateral agreement between the US and the Kyrgyz Republic.

Activity 1.6.2. Develop or update further farmer and advisory learning materials for target VCs

- Review existing learning and information materials for the selected VCs
- Contract appropriate STTA/or contractor for coordination and facilitation of the process and/or elaboration of required learning and information materials
- Facilitate validation of updated/developed learning and information materials through thematic committees consisting of technical specialists and government representatives for

Activity 1.6.3. Upgrade capacity of traditional ASPs in target VCs

For FY 17/18 the project's focus is on establishing and building the capacity of innovative service businesses which will continue with a few focused capacity upgrading activities for the traditional ASPs.

Activity 1.6.4. Facilitate the development of a government AS strategy and build capacity for social procurement of AS**Sub Activity 1.6.4.1. Government advisory service strategy or policy**

- Dialogue with government on a possible strategy, with focus on the role of the government in the advisory service system (in particular the option of financing services for farmers through government contracting).
- Establish a working group to elaborate the draft strategy, and manage the process having participating government institutions review the draft strategy.
- Sub Activity 1.6.4.2. Training and accompaniment during implementation of selected government authorities at various levels in AS contracting through social procurement.

Activity 1.6.5. Facilitate better AS stakeholder coordination

If ASPs or government request it and provide a concept with good prospects for sustainability independent of donors:

Sub Activity 1.6.5.1. Assist in the (re-)establishment of an AS industry association or other AS coordination mechanism.

Sub Activity 1.6.5.2. Provide financial and technical support for setting up or preparing for a certification, accreditation or other quality control mechanism for AS.

Sub Activity 1.6.5.3. Support establishment of a unified advisory information platform (the existing web-platform of Agro Inform Asia appears as an option).

Table 17: GNATT Chart for Strengthen Advisory Service Industry

#	Activities	FY16 Q4		FY17 Q1		FY17 Q2		FY17 Q3		FY17 Q4		FY18 Q1		FY18 Q2		FY18 Q3		Milestone								
		J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O		N	D	J	F	M	A	M	J
1.6.2	Develop or update further farmer and advisory learning materials for target VCs																									
	Review of existing materials and determine upgrading/ development needs																									Development/ up- grading concepts are available
	Update or develop re- quired materials																									Updated and new ma- terials are available

1.6.3	Upgrade capacity of traditional ASPs in target VC																										
	Renew plan for capacity upgrading needs																										Updated capacity building plan
	Organize capacity building activities																										Planned capacity building activities conducted
1.6.4	Development of government AS strategy and capacity building for social procurement of AS																										
	Dialogue with government on possible strategy and strategy development process																										Government understands its potential roles in AS system Agreed strategy development process
	Establish working group																										Agreements with working group members signed
	Develop draft strategy																										Draft strategy prepared
	Develop concept for capacity building of government in AS contracting																										Concept note prepared
	Build capacity of government in AS contracting																										Capacity building for at least two government entities completed

Note: Plan for activity 1.6.1 is provided under sub-task 1.2.

D. RISK ANALYSIS AND MITIGATION MEASURES

Table 18: Risk Analysis and Mitigation Plan for Strengthen Advisory Service Industry

No.	Activity	Deliverable	Risks	Mitigation measures	Responsible staff
1.6.1	Innovative technical and advisory service businesses	Sustainable service businesses	The risks and mitigation measures are provided in the sections on the respective value chain		Tolkun Monoldor kyzy (overall) Sabyr Toigonbaev (capacity building for service businesses in the South)

1.6.2	Develop or update further farmer and advisory learning materials for target VCs	Updated or new materials for all target value chains	We don't have enough capacity to accompany work on all desired materials	Hire additional specialist/SITTA or out-source process accompaniment function	Tolkun Monoldor kzy
1.6.3	Upgrade capacity of traditional ASPs in target VC	Organise capacity building activities	No trainers with adequate capacity available in KR	Cooperate with F2F or hire regional/international trainers	Tolkun Monoldor kzy
1.6.4	Development of government AS strategy and capacity building for social procurement of AS	Government AS strategy	Ministry of Agriculture not interested	Work with other relevant government bodies such as parliament agrarian committee, local government, Ministry of Economy, farmer representatives	Tolkun Monoldor kzy Task 3
		Capacity building for social procurement of AS	No willingness for co-financing from government	Flexible co-financing requirements	Tolkun Monoldor kzy Task 3

RESOURCES NEEDED FOR TASK I

Table I9: Resources Needed for Task I Value Chain Activities

TASK 2 INCREASE PRODUCTIVITY AND MARKETS FOR AGRIBUSINESS

Objectives:

- Market share in domestic and export markets within the target VCs increased by 25 percent
- Increased employment in agribusiness
- Increased demand by agribusinesses for raw materials from smallholders
- Increased utilization of agriculture, business marketing and financial planning skills by agribusinesses, with 80 percent of target small- and medium-sized enterprises applying improved technologies or management practices as a result of project assistance

SUBTASK 2.1 INCREASE PRODUCTIVITY AND EXPAND MARKETS FOR AGRIBUSINESS IN DAIRY

A. KEY ISSUES

During winter, the main issue is lack of raw milk supply. During the summer, the main issue is poor quality of milk due to quick spoilage due to lack of cooling facilities and cold chain.

Other issues:

- Lack of knowledge and skills to expand markets
- Poor state of facilities (outmoded equipment, low capacity, inefficient)
- Lack of financing to upgrade facilities, procure more milk or expand operations
- Inefficient operations due to poor management skills
- For those with potential for export, possible additional hindrances include reliable supply base and compliance with international standards
- Quality of the processed products in the south is not competitive with the north.

B. STRATEGY

To address the insufficient supply of milk during the winter, the project is working to increase winter milk production under Task 1.

Task 2 is responsible for engaging processors to partner with the project in developing winter milk production through supply contracts. Task 2 will also help interested SME processors in developing their technical manpower that will take responsibility for developing and expanding their supply base. This technical manpower can either be in-house or outsourced. Typically, outsourcing could either be with veterinary entrepreneurs or traders who will be responsible for the collection centers. Task 2 will facilitate a tripartite agreement between input suppliers, processors, and farmers to allow for embedded financing (feeds & vaccines).

Under Task 2, the project will support establishing appropriate supply sourcing and/or collection centers, upgrading of facilities, improving systems and human resources, accessing market information and financing, and linking with new buyers.

To develop a reliable supply base, address the issue of low quality dairy products and enable processors to develop new profitable products, the project will facilitate the establishment of milk collection points with cooling tanks. These collection points will allow processors to extend the supply base, optimize logistics and decrease spoilage and acidity of summer milk coming in for processing. At least four collection points with 800-liter capacity will be established. Around 50 farmers will be able to supply milk on daily basis to each collection point during summer time.

C. OBJECTIVES (LOP INDICATOR TARGETS)

Table 20: Indicator Targets for Dairy Value Chain

Indicator	FY 17 Target	FY 18 Target	FY 17 & 18 TOTAL
Number of rural households benefiting directly from USG interventions	450	600	600
Number of individuals trained	30	38	38
Number of private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and CBOs receiving USG assistance	6	7	7
Number of farmers and others who have applied improved technologies or management practices	30	38	38
Number of jobs attributed to project implementation	15	19	34
Value of incremental sales (farm-level) attributed to project implementation in USD	39,706	52,941	92,647
Increase in raw materials procured by SMEs assisted by the project (MT)	270,000	360,000	630,000
Value of incremental sales (enterprise-level) attributed to project implementation in USD	95,294	127,059	222,353
Value of new private sector investment in the agriculture sector or food chain in USD	90,000	30,000	120,000
Total increase in installed storage capacity (MT)	1	1	2
Increase in installed processing capacity (MT)	2	2	4
Number of public-private partnerships formed	3	4	7

D. ACTIVITIES, OUTPUTS, MILESTONES, AND TIMELINES

Activity 2.1.1 Identify and select Agro Horizon partners

Activity 2.1.2 Develop Public-Private Partnership Agreement

Activity 2.1.3 Implement grant agreements which could include any or all of the following:

Sub Activity 2.1.3.1 Develop supply base in case of lead firm (coordinated with Task 1)

Sub Activity 2.1.3.2 Improve supply chain (e.g. facilitate establishment of collection points, improve logistics, establishment of cooling facilities),

Sub Activity 2.1.3.3 Upgrade facilities through equipment support

Sub Activity 2.1.3.4 Systems re-engineering, upgrading or enhancement including training, and management/operations improvement.

Sub Activity 2.1.3.5 Facilitate adoption for food safety standards, such as HACCP/ISO 22000 certification, and

Sub Activity 2.1.3.6 Facilitate access to financing, leasing services, DCA and GDA facilities

Activity 2.1.4 Marketing support including

Sub Activity 2.1.4.1 Product diversification

Sub Activity 2.1.4.2 Packaging, labeling and overall product development

Sub Activity 2.1.4.3 B2B linkages and trade fair participation

Table 2I: GANTT Chart for Dairy Value Chain

#	Activities	FY16 Q4			FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
2.1	Increase productivity and expand markets for agribusiness in dairy																									
2.1.1	Identify and select Agro Horizon partners																									FY17 – 4, FY18 – 2 partners
2.1.3	Develop PPP Agreement																									6 grant agreements
2.1.4	Implement grant agreements which could include any or all of the following:																									
2.1.4.1	Develop supply base (in coordination with task 1),																									Increased raw material procurement by 20 percent

[illegible]

E. RISK ANALYSIS AND MITIGATION PLAN

Table 22: Risk Analysis and Mitigation Plan for Dairy Value Chain

#	Activity	Deliverable	Risks	Mitigation Plan	Responsible Staff
2.1.1	Identify and select Agro Horizon partners	Identified partner SMEs	<p>Investors not willing to invest in new processing facilities</p> <p>Lack of interest from SMEs (processors/aggregators) to partner with the project</p>	<p>Orientate the project to exports of dairy products;</p> <p>Focus on increasing exporting capacities of processors;</p> <p>Work on opening export opportunities for dairy products and provide information on opportunities in export markets.</p> <p>Prepare CBA to sell the idea to the private sector;</p> <p>Support start-ups and investments by provision of technical assistance and leveraging</p>	<p>Nurgazy Samidinov, Agribusiness Coordinator</p> <p>Maksat Iskakov, Agro Enterprise Manager</p>

				<p>USAID's and Agro Horizon's access to finance investment facilities;</p> <p>Increase attractiveness of the project by providing more incentives like target TA and co-investment.</p>	
2.1.3.1	Develop supply base (in coordination with Task 1)	Increased raw material procurement by 20%	Farmers not interested to participate in project	Explain benefits of shifting calving time and winter milk	<p>Nurgazy Samidinov, Agribusiness Coordinator</p> <p>Sabyr Toigonbaev, Agro Productivity Manager</p>
2.1.3.2	Improve supply chain (e.g. facilitate establishment of collection points, cooling facilities)	Improved milk quality	Lack of interest from processors to provide incentives for better quality milk	Encourage new investors in milk processing especially cheese; support product diversification for existing processors in the south	Nurgazy Samidinov, Agribusiness Coordinator
2.1.4	Systems re-engineering, upgrading or enhancement	Facilities with improved systems, more efficient operations	Lack of interest on the part of processors due to lack of motivation (markets), lack of qualified personnel, lack of financing	Provide marketing support, STTA, training of personnel and assistance in accessing financing	Maksat Iskakov, Agro Enterprise Manager
2.1.5	Facilitate adoption for food safety standards, such as HACCP/ISO 22000 certification	SMEs ready for HACCP certification	Inability of SMEs to implement standard requirements	Provide training and assistance in recruitment of new better qualified personnel	Maksat Iskakov, Agro Enterprise Manager
2.1.6	Facilitate access to financing, leasing services, DCA and GDA	Access to formal financing through DCA	SMEs unwilling to borrow from BT bank because of high interest rate.	Carry out an awareness raising campaign on the benefits of the DCA facility such as lower collateral needed.	Adilet Maimekov, Access to Financial Services Manager
2.1.7	Provide marketing support	Incremental sales at enterprise level	Weak marketing and managerial capabilities of partners	Inclusion in PPP of technical assistance in marketing, new product development, strategic and operational management etc.	Maksat Iskakov, Agro Enterprise Manager

SUBTASK 2.2 INCREASE PRODUCTIVITY AND EXPAND MARKETS OF AGRIBUSINESS IN LIVESTOCK FOR MEAT AND MEAT PRODUCTS

A. KEY ISSUES

- Lack of quality feed, especially in winter, leading to low meat output which are raw material for butchers and/or processors
- Exports to traditional markets constrained because of uncertainty about safety of locally-made meat products and limiting products to domestic market only
- High competition in meat products market. Meat processors in the north use cheap imported meat limiting potential investor interest in meat processing and resulting in lack of modern and efficient processing facilities in the ZOI.

Opportunity: Kazakhstan, Russia and China are open to import meat products from companies that pass the standards and traceability requirements.

B. STRATEGY

While the issues besetting the livestock sub-sector are huge and not within the project's capacity to address, there are opportunities to assist specific meat processing companies in the south and in Naryn to be more competitive with their northern counterparts in product quality, packaging and branding.

There is also the opportunity to partner with at least one large meat processor from the north to establish a "Halal" and HACCP-certified slaughterhouse in the project's ZOI. The project will assist this processor in co-investing in the slaughterhouse and developing a traceable supply base in Naryn or Osh. With a traceable supply of cattle and food safety certification, the processor will be able to access export markets for its processed meat products.

The project will work with three other meat processors to enhance their production and marketing capacities, implement food safety standards, and develop a supply base with an overarching goal to enable them to expand shares in domestic market and reach export markets.

The project will not be allocating much effort to fresh meat and live animal trade because existing constraints inhibit significant impact in these sub-sectors.

C. OBJECTIVES (LOP INDICATOR TARGETS)

Table 23: Indicator Targets for Meat and Meat Products Value Chain

Indicator	FY 17 Target	FY 18 Target	FY 17 & 18 TOTAL
Number of rural households benefiting directly from USG interventions	504	259	259
Number of individuals trained	6	-	6
Number of private enterprises (for profit), producers or organizations, water users associations, women's groups,	3	4	4

trade and business associations, and CBOs receiving USG assistance			
Number of farmers and others who have applied improved technologies or management practices	6	-	6
Number of jobs attributed to project implementation	6	6	12
Value of incremental sales (farm-level) attributed to project implementation in USD	304,279	552,388	856,668
Increase in raw materials procured by SMEs assisted by the project (MT)	562,505	1,125,005	1,687,510
Value of incremental sales (enterprise-level) attributed to project implementation in USD	909,926	1,836,397	2,746,323
Value of new private sector investment in the agriculture sector or food chain in USD	80,000	20,000	100,000
Total increase in installed storage capacity (MT)	TBD	TBD	TBD
Increase in installed processing capacity (MT)	113	226	340
Number of public private partnerships formed	3	1	4

D. ACTIVITIES, OUTPUTS, MILESTONES, AND TIMELINES

Table 24: GANTT Chart for Meat and Meat Products Value Chain

#	Activities	FY16 Q4			FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
2.2	Increase productivity and expand markets of agribusiness in livestock for meat and meat products																									
2.2.1	Identify and select partners (slaughterhouses and processors)																									FY17 – 3, FY18 – 1 partner
2.2.2	Develop PPP agreement																									4 grant agreements signed by FY18
2.2.3	Implement PPP agreement which may include:																									
2.2.3.1	Establish facility (slaughterhouse)																									1 slaughterhouse in Naryn established in FY17

[illegible]

E. RISK ANALYSIS AND MITIGATION PLAN

Table 25: Risk Analysis and Mitigation Plan for Meat and Meat Products Value Chain

#	Activity	Deliverable	Risks	Mitigation Plan	Responsible Staff
2.2.1	Identify and select partners (slaughterhouses and processors)	4 SMEs identified as partners	Not enough number of SMEs are willing to expand investment in the South	<p>Prepare CBA to sell the idea to the private sector</p> <p>Share in the risk through 50% leverage contribution</p> <p>Work on opening export opportunities for meat products</p>	<p>Nurgazy Samidinov, Agribusiness Coordinator</p> <p>Maksat Iskakov, Agro Enterprise Manager</p>
2.2.2	Develop PPP agreement	Signed grant agreements	Lack of interest from SMEs (meat processors) to partner with	Support start-ups and investments by provision of technical assistance and leveraging USAID's and Agro	Nurgazy Samidinov, Agribusiness Coordinator

			the project; SMEs lack financial resources	Horizon's access to finance investment facilities Increase attractiveness of the project by providing more incentives like targeted TA and co-investment	Maksat Iskakov, Agro Enterprise
2.2.3.1	Establish facility (slaughterhouse)	1 slaughterhouse in Naryn established in FY17	Investor withdraws proposal to set up a slaughterhouse	Work on finding alternative investors	Nurgazy Samidinov, Agribusiness Coordinator Mirseyit Sydykov, Agribusiness Coordinator
2.2.3.2.	Upgrade of facility	2 facilities upgraded in FY17 and 1 in FY18	Inability of SMEs to co-invest in upgrade of facilities	Facilitate access to finance, leasing services, DCA and GDA facilities	Nurgazy Samidinov, Agribusiness Coordinator Mirseyit Sydykov, Agribusiness Coordinator
2.2.3.3.	Training on product development/diversification	Improved technical capacity of SMEs	Inability to deliver due to lack of qualified personnel	Provide training and assistance in recruitment of new better qualified marketing and technical personnel among fresh university graduates.	Mirseyit Sydykov, Agribusiness Coordinator
2.2.3.4	Facilitate adoption for food safety standards (in-house labs, to HACCP/ISO 22000 certification)	3 SMEs assisted, 1 processor ready for HACCP certification by LOP	Inability of SMEs to implement standard requirements	Provide training and assistance in recruitment of new better qualified personnel	Mirseyit Sydykov, Agribusiness Coordinator
2.2.3.5	Set up of traceability system and improved production among suppliers (c/o Task 1)	Incremental sales at farmer and enterprise level	Farmers not interested to participate in project	Explain benefits of traceability system	Nurgazy Samidinov, Agribusiness Coordinator Sabyr Toigonbaev, Agro Productivity Manager
2.2.3.6	Provide marketing support (B2B, labeling, etc.)	Incremental sales at enterprise level	Weak marketing and managerial capabilities of partners	Inclusion in PPP of technical assistance in marketing, new product development, strategic and operational management etc.	Mirseyit Sydykov, Agribusiness Coordinator

2.2.4	Facilitate enhancement of production capacities (upgrade equipment through increasing access to finances, leasing services, DCA and GDA facilities)	Access to formal financing through DCA	SMEs unwilling to borrow from BT bank because of high interest rate.	Carry out an awareness raising campaign on the benefits of the DCA facility such as lower collateral needed.	Adilet Maimekov, Access to Financial Services Manager
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SUBTASK 2.3 INCREASE PRODUCTIVITY AND EXPAND MARKETS OF AGRIBUSINESS IN FRUITS AND VEGETABLES

A. KEY ISSUES

Lack of commercial consolidation of farmers' produce. Currently, wholesale trade which includes local product sales is organized at existing monopolist market places or spontaneously directly off the trucks parked at local town markets. There are private, small capacity storage facilities that bear all transactional costs for each deal (circulating capital to purchase production, storage costs, transport costs, cost to find buyers, etc.).

In many countries around the world, consolidation centers are established under local producer initiative. The center is often the result of producers' groups, associations, and cooperative operations. Any farmer group building a consolidation center would ideally receive support from local authorities through preferential credits and grants, or with support of an international aid project.

Taking into account Kyrgyz market specifics, especially the limited number of functional local producer groups, it is unlikely that a farmer consolidation center would be organized and financed directly by a group of local producers. The difficulties of individual farmers obtaining commercial credit (high interest rates, limited access to preferential credits and grants) remain the main challenges to farmer consolidation center construction. Therefore, consolidation, marketing and distribution centers are more likely to obtain external commercial finance if SMEs or aggregators/integrators are involved.

Operational inefficiencies and poor enterprise management skills. A major challenge of fruit processors is the seasonality of raw materials. Many processors operate under capacity because they stop operations once they run out of raw materials. On the other hand, they don't have sufficient storage to buy as much raw materials when these are in abundant supply. Most of these enterprises are not professionally run.

Poor quality infrastructure and quality management at enterprise level from the receiving to packaging and labeling of products.

Limited information on market opportunities and weak capacity to enter new markets.

Contract growing or buy back contracts and embedded financing is practically non-existent in the south. Agribusinesses in the north (Chui) have had bad experiences with farmers in the south defaulting on their contracts. Globally, the same issues have been encountered, but several contract farming schemes have been successful. Contract farming is actually the real value chain development, where both the buyer and the sellers establish a long-term relationship, work to add more value to the product and

share the profit in an equitable way. Failure of the relationship usually happens when opportunistic buyers offer higher prices to farmers and/or when there is a failure in the integrator's target market.

B. STRATEGY

Open-source or sub-sector value chains. The project's approach to develop value chains with open sourced (as opposed to contract farming) raw materials focuses support in farm productivity improvements in pre-identified geographic clusters with large numbers of producers. In these clusters, Task 2 will focus on establishing logistics centers, consolidation centers and cold storage, or processing facilities, as appropriate. Five major fruit and vegetable production areas have been identified with centers located in the following rayons: Batken, Aksy, Nookat, Aravan and Kara Suu, and Kadamjay.

In Batken and Aksy, the predominant products are dried apricot and plums. In these clusters, the project will support SMEs to establish or upgrade drying facilities that can also serve as consolidation centers. In Batken, the project plans to support two medium-sized facilities for the sorting, grading, washing, drying and packing of dried apricots. These facilities will have an output capacity of three tons per day, and are expected to operate for nine months out of the year. In Aksy, the project will support up to five plum drying facilities to increase their capacity and improve their processing practices, with a focus on improved product quality, packaging and labeling and sanitary operations. At least two facilities will be assisted to obtain HACCP certification.

In Nookat, Aravan and Kara Suu, and Kadamjay, fruits and vegetables are mostly traded for the fresh market (export and domestic) and for value-added processing into juice, puree or jams. In these clusters, the project will support one large logistics center with cold storage, one sorting, grading and packing facility for fruits, and one sorting, grading and packing facility for vegetables. Additionally, the project will support up to five consolidation centers with expanded or additional facilities for cold storage. The project will also support processing facilities for puree, juice, and jam if investors are found. These facilities are anticipated to absorb the additional production that is expected from the project's support under its Task 1.

The project will also provide technical assistance, training, market linkage assistance and support to product development including packaging, labeling and branding, and facilitate HACCP and other international standards certification.

All support to SMEs will be done through a public-private partnership arrangement where the project will leverage the contribution of the SMEs to expand outreach to smallholder farmers through market expansion.

Lead Firm Value Chain

Agro Horizon will identify and give support to investors willing to invest in Osh, Batken, Jalal-Abad and/or Naryn and give contract farming a try. Critical factors for success are 1) reliability of the private sector partner (solid business operation and reputation), 2) the existence of a market for the product, 3) the farm gate price offered by the integrator offers a higher gross margin for the farmer or more reliable income stream compared to their existing crops, and 4) the integrator is prepared to co-invest in embedded financing, technical assistance and close monitoring.

The Agro Horizon project will support private sector partner to organize production clusters and to educate farmers on the value of strategic partnerships. Other support will be identified and spelled out in the public-private partnership agreement (grant).

C. OBJECTIVES (LOP INDICATOR TARGETS)

Table 26: Indicator Targets for Fruit and Vegetable Value Chain

Indicator	FY 17 Target	FY 18 Target	FY 17 & 18 TOTAL
Number of rural households benefiting directly from USG interventions	4,700	6,875	6,875
Number of individuals trained	246	20	266
Number of private enterprises (for profit), producers organizations, water users associations, women's groups, trade and business associations, and CBOs receiving USG assistance	23	4	27
Number of farmers and others who have applied improved technologies or management practices	246	280	280
Number of jobs attributed to project implementation	84	98	182
Value of incremental sales (farm-level) attributed to project implementation in USD	312,128	387,749	699,877
Increase in raw materials procured by SMEs assisted by the project (MT)	2,889	4,611	7,500
Value of incremental sales (enterprise-level) attributed to project implementation in USD	3,790,235	4,700,294	8,490,529
Value of new private sector investment in the agriculture sector or food chain in USD	854,000	66,000	920,000
Total increase in installed storage capacity (MT)	1,100	200	1,300
Increase in installed processing capacity (MT)	2,289	-	2,289
Number of public-private partnerships formed	23	4	27

D. ACTIVITIES, OUTPUTS, MILESTONES, AND TIMELINES

Table 27: Indicator Targets for Fruit and Vegetable Value Chain

#	Activities	FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
2.3	Increase productivity and expand markets of agribusiness in fruits and vegetables																						

2.3.1	Develop and sign PPP agreements with SMEs/entrepreneurs																					grant agreements are signed with SME investors
	USAID approval including NXPs & Restricted goods, and SON waiver																					USAID approvals obtained
2.3.2	Procurement of equipment & materials																					All necessary equipment procured and delivered to beneficiaries
2.3.3	Establishment/Upgrading of facilities																					SMEs upgraded in FY17 and SMEs in FY18
2.3.4	Certification and standards																					2 Processors ready for HACCP certification in FY 17 and 2 in FY18
2.3.5	Raw materials procurement, processing & sales																					SME partners report procurement and sales
2.3.6	Provide marketing support																					As appropriate, marketing, pricing and product development assistance is provided

E. RISK ANALYSIS AND MITIGATION PLAN

Table 28: Risk Analysis and Mitigation Plan for Fruit and Vegetable Value Chain

#	Activity	Deliverable	Risks	Mitigation Plan	Responsible Staff
2.3.1	Develop and sign PPP agreements with SMEs/entrepreneurs	Signed grant agreements	Difficulties in finding viable and willing processors and consolidators to partner with.	<p>Attract investors who would establish new or upgrade existing processing facilities</p> <p>Support start-ups and investments by provision of technical assistance and leveraging USAID's and Agro Horizon's access to finance investment facilities</p>	<p>Zhibek Abdyramanova, Marketing Research and Trainings Manager</p> <p>Iskender Sattarov, Women Agribusiness Development Specialist</p>

				Increase attractiveness of the project by providing more incentives like massive TA and co-investments	
2.3.2	Procure equipment & materials	Equipment and materials delivered on time	Delays with procurement and delivery of goods	Improve coordination between activity and procurement plans	Grants and Procurement Department
2.3.3	Establish/upgrade facilities	SMEs upgraded	Inability of SMEs to co-invest in upgrade of facilities	Facilitate access to finances, leasing services, DCA and GDA facilities	Iskender Sattarov, Women Agribusiness Development Specialist
2.3.4	Certification and standards	Processors ready for HACCP certification	Inability of SMEs to implement standard requirements	Provide training and assistance in recruitment of new better qualified personnel	Zhibek Abdyramanova, Marketing Research and Training Manager
2.3.5	Raw materials procurement, processing & sales	Incremental sales at farm level, incremental purchase of raw material by SMEs	Difficulties in promoting closer links within VC; disagreements between VC actors over prices, quality etc.	Facilitate regular meetings and discussions between participating actors to resolve emerging issues	Iskender Sattarov, Women Agribusiness Development Specialist
2.3.6	Provide marketing support	Incremental sales at enterprise level	Weak marketing and managerial capabilities of partners	Inclusion in PPP of technical assistance in marketing, new product development, strategic and operational management etc.	Zhibek Abdyramanova, Marketing Research and Training Manager Iskender Sattarov, Women Agribusiness Development Specialist

RESOURCES NEEDED FOR TASK 2

Table 29: Resources Needed for Task 2 Value Chain Activities

TASK 3 IMPROVE ENABLING ENVIRONMENT FOR AGRICULTURE SECTOR GROWTH

Objectives:

- Increased understanding and ability among value chain players to comply with relevant policies and regulations and to access financial capital
- Increased range of relevant financial products and services offered to smallholders and agriculture enterprises, with 35 percent more targeted entities using financial services
- Reduced barriers to international markets
- Increased human and institutional capacity of targeted government agencies

SUBTASK 3.1 SUPPORT INSTITUTIONAL CAPACITY DEVELOPMENT AND SIMPLIFIED BUSINESS ENABLING ENVIRONMENT

A. KEY ISSUES

- Lack of up-to-date information on local or foreign market requirements for priority value chains (standards, branding and marking issues, packaging etc.)
- Lack of clear trade facilitation strategy in the government and low level enforcement of existing laws
- Barriers for SMEs that prevent them from entering domestic and international markets or that create operational hurdles e.g., lack of necessary systems and certifications

B. STRATEGY

Under Task 3, the project will focus on reducing barriers to market access by SMEs in its priority value chains through: 1) awareness campaigns on market requirements among the value chain players, 2) improved access to market information by strengthening existing market information systems and market information dissemination, 3) stronger capacity of organizations that provide accreditation and/or certification for compliance with standards, e.g., HACCP, in collaboration with other donors such as GIZ, 4) support to better enforce regulatory and trade facilitation policies, and 5) support activities that promote favorable business enabling environment such as affiliation of the fruit seedling nurseries to the International Seed Testing Association (ISTA).

The project's support will combine TA and limited commodity support. Commodity support to strengthen government agencies is contingent upon the re-instatement of the bilateral agreement. Measures outlined in the work plan are included with an understanding that the actions will support the project's priority value chains (livestock, vegetables and fruits) and lead firm activities.

C. OBJECTIVES (LOP INDICATOR TARGETS)

Table 30: Target Indicators for Business Enabling Environment

Indicator	FY 17 Target	FY 18 Target	FY 17 & 18 TOTAL
Number of policy forums	2	2	4
Number of that actors will gain an increased understanding of and ability to comply with relevant policies and regulations and local and foreign market requirements	250	250	500
Information dissemination system supported	1		1
Number of organizations supported towards obtaining accreditation for product and standards certification	2	3	5
Number of government agencies supported	1 national and 4 local government agencies		5

D. ACTIVITIES, OUTPUTS, MILESTONES, AND TIMELINES

Activity 3.1.1 Policy Forums

Sub-activity 3.1.1.1 Support platforms (forums) for wide stakeholder discussions about business enabling environment

Task 3 will conduct four forums that will highlight information regarding the ongoing reforms and their implications especially as they relate to livestock, vegetables, and fruits in the zones of influence (Osh, Jalalabad, Batken and Naryn). Discussions may include information about Kyrgyzstan's membership in the Eurasian Economic Union (EEU) and EU GSP+ program. Possible dialogue topics will be around:

- certification requirements and procedures
- border issues in accessing foreign markets and the role of the state agencies in the facilitation of cross border trade
- local market requirements and systems
- slaughterhouse regulations
- implementation of the State program on export

The forums will last approximately four hours and during the meeting:

- external experts will present on the legal framework (last developments, contradictions and recommendations);
- government officials will discuss current efforts in the government as it relates to supporting the selected value chains;

Agenda and themes of the forums will be developed in close cooperation with Task 1 and 2 and private sector partners. The forums will be attended by more than 50 participants consisting of key leaders and decision makers from the government, civil society, international donor organizations and private sector and mass media representatives. Wide media coverage is vital; articles and other materials will be published through online portals, print media, radio and TV. One forum each will be conducted in Jalalabad and Osh and two in Bishkek. Three out of four forums will be conducted in FY 2017 and one in FY 2018.

Sub-activity 3.1.1.2 Provide technical assistance to relevant state agencies

Forums mentioned above will also serve as fact-finding tools along with interviews with relevant stakeholders to identify areas in which government agencies require technical support. Kyrgyzstan joining the EEU has led to changes in trade regulations with neighbors and other trade partners and to ambiguity in doing business for all stakeholders including the state agencies. Agro Horizon's partner, AIRD, will provide technical assistance to relevant state agencies in their efforts to deliver services to agricultural actors in the project's ZOI and priority value chains if discussions with stakeholders provide conclusive evidence to the viability of such efforts. In the consideration process, special attention will be given to the possibility of achieving measurable impact within a short timeframe given that the project will complete its activities in 2018.

Findings of the engagement will be further disseminated among the main market support organizations (business associations or unions) with strong lobbying efforts who can further act as watchdogs and provide sustainability to these efforts.

Depending on the nature of the technical assistance trainings and other activities, events will be conducted to build the capacity of relevant state officials.

Activity 3.1.2 Strengthen enforcement of existing policies

Sub-activity 3.1.2.1 Strengthen facilities to support trade to foreign markets

Agro Horizon will meet with experts, laboratories and other stakeholders in order to identify gaps related to services needed by players in the project's priority value chains to enable them to comply with market requirements. Once the capacity support is identified, the project will identify a partner to support with equipment and other capacity building activities to provide the local SME and producers with access to the necessary laboratory or certification services.

Sub-activity 3.1.2.2 Strengthen government agencies' capacity to facilitate trade

This activity will provide technical assistance in re-engineering business processes within a single window agencies and/or supporting market support institutions in establishing or enhancing help desk facilities.

Trading across borders in Kyrgyzstan is conducted with immense hurdles. Kyrgyzstan ranks 183 out of 189 in the World Bank Doing Business trading cross border indicator. This is due to high costs and length of the process. It takes 63 days to export goods and an average USD 4,760 per container, whereas to import it takes 73 days and USD 6,000, on average.

The GOKR is piloting a Single Window Information Systems (SWIS) managed by the State Enterprise Single Window Center for Foreign Trade (SESW) under the Ministry of Economy. SWIS is designed to allow enterprises to submit one online document. According to a UNECE report,

SESW staff maintain that SWIS has reduced data elements requirements from approximately 1000 to 129 in 2014. In 2015, there were approximately 2000 traders benefitting from the given service. Currently SWIS is optional and it does not involve fundamental changes on the formalities of state agencies. Hence, it is a new electronic layer on top of the standing manual process.

This information confirms the need to conduct an assessment of how state agencies are facilitating cross border trade in the ZOI as the above mentioned measures are in the pilot phase and are yet to be implemented across the country. It is important to assess the business processes of government agencies within single window agencies in the ZOI as they relate to the Agro Horizon value chains and also the opportunities of assisting market support institutions in establishing help desk facilities to support traders in preparing trade documents for export activities.

Agro Horizon will conduct consultations with relevant stakeholders and identify feasible measures for interventions over the next 18 months.

Sub-activity 3.1.2.3 Support an organization in obtaining accreditation for standards and compliance certification

According to information provided by GIZ experts, local companies can export livestock produce in raw, frozen form if they establish the required health and safety systems and can prove traceability even if the import of products from Kyrgyzstan is banned due to epidemiological or other reasons. However, these requirements are new in the country and no local organizations are accredited by international authorities to carry out product certification. Currently, GIZ is building the capacity of a number of local firms to provide technical consultations in implementing health and safety standards. The project will collaborate with GIZ to assist at least five SMEs to obtain HACCP certifications and accreditation of a slaughter house for eligibility to export to EEU and China. In addition, the project will strengthen local firms involved in certification to facilitate access of agribusinesses to standards certification.

Activity 3.1.3 Market information dissemination

Sub-activity 3.1.3.1 Publication of manuals or other resources

Research shows that in Kyrgyzstan print materials are passed up to three readers, signifying that there is deficit of quality information, especially as it relates to economic issues including agriculture and trade. The project supports the development, publication and dissemination of brochures, manuals, etc. related to doing business in agriculture.

As an initial step, Task 3 will conduct an information gap analysis related to the business enabling environment among main stakeholders including producers/farmers (Task 1) and SMEs engaged in the processing or trade (Task 2) of livestock and fruit. The information assessed will include the following:

- different tasks and business processes that the actors have to undertake in order to successfully market their commodities in both local (supermarkets) and foreign markets
- product quality, packaging, branding requirements, etc.
- health and safety requirements and those institutions that can support the implementation of health and safety systems

It is important that leaflets and brochures communicate complex subjects, such as processes and mechanisms; in a highly visual way with infographics. Information will be disseminated among project partners through Task 1 and 2. Depending on the technicality of the materials required, the resources will be developed in house or an external STTA will be hired.

Sub-activity 3.1.3.2 Support the establishment or enhancement of information dissemination system in agriculture

Currently due to Kyrgyzstan joining the EEU the nature of trade and competition has undergone significant changes. There is intense ambiguity and is leading to significant losses for local enterprises. Equipping the local SME with information about market requirements and changes in the regulatory framework in the EEU and other trade partner countries could significantly support the local SMEs in decision-making.

Agro Horizon will include in its Annual Program Statement (APS) its interest to support strengthening of a local organization that is already in the business of information dissemination.

Activity 3.1.4 Support the affiliation of the fruit seedling nurseries to the International Seed Testing Association (ISTA)

Under Task 1, the project will support nurseries in setting up the traceability system for seedlings of various fruit varieties imported from Holland during PY 2 of the project. Task 3 will strengthen this effort by helping to obtain affiliation with the International Seed Testing Association (ISTA) for these nurseries as a form of international accreditation.

Table 31: GANTT Chart for Business Enabling Environment Activities

#	Activities	FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
3.1.1	Support policy reforms																						
3.1.1.1	Support platforms (forums) for wide stakeholder discussions about business enabling environment																						Four forums held with 50+ participants representing public and private sector, international donor organizations and NGO
3.1.1.2	Provide technical assistance to relevant state agencies																						Four government agencies in the regions
3.1.2	Strengthen enforcement of existing policies																						
3.1.2.1	Strengthen facilities to support trade to foreign markets																						One organization supported in facilitating trade to foreign markets
3.1.2.2	Strengthen government agencies' capacity to facilitate trade																						One central government agency supported

[illegible]

E. RISK ANALYSIS AND MITIGATION PLAN

Table 32: Risk Analysis and Mitigation Plan for Business Enabling Environment Activities

#	Activity	Deliverable	Risks	Mitigation Plan	Responsible Staff
3.1.1.1	Support platforms (forums) for stakeholder discussions about business enabling environment	Policies & actionable recommendations towards improved BEE in agriculture	Low interest among the key stakeholders	Negotiating the agenda with the key stakeholders prior to the forums	PPP Coordinator, and partner organization
3.1.1.2	Provide technical assistance to relevant state agencies	STTA report and letters from the relevant state agency	Limited time and high level of bureaucracy	Support private sector players such as associations and laboratory owners	PPP Coordinator, AIRD STTA
3.1.2.1	Strengthen facilities to support trade to foreign markets	A laboratory or facility is upgraded or strengthened	Lack of interest from private sector	Needs assessment, cost to benefit analysis to determine feasibility. If not feasible, USAID will be informed	PPP Coordinator and STTA

3.1.2.2	Strengthen government agencies' capacity to facilitate trade	Strengthen Trade help desks	Low capacity of the agencies/organizations	Look for private sector alternative such as the platform for Market Information	PPP and training coordinator and STTA
3.1.2.3	Support organizations in obtaining accreditation for standards and compliance certification	3 SMEs obtain HACCP, one slaughter house in the ZOI obtains export permission to EEU and China	Readiness of SMEs to engage in the process and subsequent cost of certification	Start capacity building by Q1 of FY17 to obtain accreditation	PPP coordinator, Tasks 1 & Task 2 teams, STTA
3.1.3.1	Publish manuals or other resources	Manuals and brochures published and distributed	Low interest among the recipients of the information	Analysis of information gap and needs; start dissemination to SME partners	PPP Coordinator, Communications Team, and Task 1 and 2 staff
3.1.3.2	Support the establishment or enhancement of information dissemination system in agriculture	Expanded information gathering and dissemination capacity of at least one organization	Dispersed sources of information, especially on the production side; Sustainability of the platform without donor support	Engage local government and agriculture coordination platforms in e-data collection as well as access and onward dissemination to farmers	PPP Coordinator; STTA
3.1.4	Support the affiliation of the fruit seedling nurseries to the International Seed Testing Association (ISTA)	At least one nursery accredited with ISTA	Readiness of nursery operators to engage and sustain this effort.	Cost to benefit analysis to show advantage and future incomes.	PPP Coordinator, Task 1 and STTA

SUBTASK 3.2 INCREASE ACCESS TO FINANCIAL PRODUCTS AND SERVICES

A. KEY ISSUES

- High interest rates of financing especially micro-financing
- Strict terms and conditions of payments that may not be applicable for agricultural loans
- Lack of infrastructure for farmers living in remote areas to access financial services

B. STRATEGY

In PY3 and PY4, Agro Horizon will focus on the following priority areas:

- Improve/increase access to formal financing especially for SMEs through utilization of the Development Credit Authority (DCA)
- Work with financial institutions in expanding the infrastructure for mobile payment / mobile wallet systems to reach farmers in Agro Horizon's production clusters.

- Promote embedded services and financing (e.g. buyers offering credits for inputs in exchange for guaranteed marketing of products through formal contracts etc.)
- Carry out a competition for grant support among financial institutions for innovative financial products geared towards the agriculture sector

C. OBJECTIVES (LOP INDICATOR TARGETS)

Table 33: Indicator Targets for Access to Financial Products and Services

Indicator	FY 17 Target	FY 18 Target	FY17 & 18 TOTAL
Value of Financing accessed by all Agro Horizon beneficiaries in USD	\$1,165,750	\$662,500	1,828,250
Number of Agro Horizon-supported MSMEs who used Financial Services	4,975	5,987	10,962
Rural HH benefitted by innovative financing	>25	>75	>100

D. ACTIVITIES, OUTPUTS, MILESTONES, AND TIMELINES

Activity 3.2.1 Access to formal financing through DCA

Increase access to formal financing especially for SMEs through utilization of Development Credit Authorities (DCA).

Activity 3.2.2 Expand outreach of mobile wallet systems

Work with financial institutions in expanding the infrastructure for mobile payment/mobile wallet systems to reach farmers in the project's production clusters. An STTA will be hired for this as appropriate. The project will encourage partner SMEs through a stipulation in the grant agreement that payments to farmers should be through e-banking/mobile wallet system as much as possible. The project will facilitate the setting up of the infrastructure so that partner agribusinesses and their farmer-suppliers benefit from the mobile banking system.

Activity 3.2.3 Support embedded services and financing

Embedded financing of inputs and services is one of the most successful approach to agricultural financing. In cooperation with Task 2 and Task 1, embedded financing of inputs as well as technical, machinery and advisory services will be promoted through service providers receiving grants from the project. Tri-party agreement among processors, input suppliers and producers will also be encouraged.

Activity 3.2.4 Support innovative financial products

Carry out a competition among financial institutions (including but not limited to banks, MFIs, insurance organizations, etc.) for innovative financial products geared towards the agriculture sector (Profit Planner © tool for financial modeling of households and businesses in the selected value chains shall be considered for usage where applicable). At least one grant funding will be disbursed on a matching basis to buy

down perceived investment risk. This grant funding will aim to generate at least \$100,000 financing to at least 100 MSMEs.

Table 34: GANTT Chart for Access to Financial Products and Services Activities

#	Activities	FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
3.2	Increase access to appropriate financial products and services																						
3.2.1	Access to formal financing through DCA																						At least two SMEs have accessed DCA facility
3.2.2	Expand outreach of mobile wallet systems																						At least one financial institution collaborates with AHOP in expanding mobile wallet system
3.2.3	Support embedded services and financing																						Partner service providers are providing embedded financing
3.2.4	Support innovative financial products																						At least one innovative financial product implemented

E. RISK ANALYSIS AND MITIGATION PLAN

Table 35: Risk Analysis and Mitigation Plan for Access to Financial Products and Services Activities

#	Activity	Deliverable	Risks	Mitigation Plan	Responsible Staff
3.2.1	Access to formal financing through DCA	At least one SME is assisted in accessing DCA	Currently, the only bank with DCA facility is Bai Tushum bank. SMEs are generally unwilling to borrow from BT bank because of high interest rate.	Carry out an awareness raising campaign on the benefits of the DCA facility such as lower collateral needed.	Access to Financial Services Manager (A2F Manager)

3.2.2	Expand outreach of mobile wallet systems	At least two partner SMEs are using mobile wallet system to pay for goods procured from farmers	Partner SMEs and producers are not using and might not use in the future mobile payment / wallet systems	Provide condition in the grant agreement that payments to farmers should be through e-banking/mobile wallet system as much as possible. Facilitate partnership between SMEs and financial organizations to utilize e-banking/ mobile wallet system.	A2F Manager
3.2.3	Support embedded services and financing	At least 50% of the targeted number of beneficiaries (~5000) accessing financing do so through embedded financing	The risk here is pole vaulting by the farmers, i.e., selling their produce to opportunistic buyers and not paying for the cost of services and inputs.	Explain the value of strategic partnership among value chain players. Input and service providers to also be the aggregators at the farm level	A2F Manager
3.2.4	Support innovative financial products	One innovative financial product is piloted	Lack of interest among financial institutions	Matching grant support to buy down perceived risk	A2F Manager

SUBTASK 3.3 HUMAN AND INSTITUTIONAL CAPACITY DEVELOPMENT TO IMPROVE BUSINESS ENABLING ENVIRONMENT

Agro Horizon is contractually mandated to build institutional and human capacity of both public and private organizations in Kyrgyzstan to support accelerated growth of an equitable and diversified economy. Towards this end, under Subtask 3.1 support will be provided to key partner government agencies and private sector organizations with critical roles to reduce barriers to market access. Under Subtask 3.3, two main activities will be carried out: 1) directed human and institutional capacity development supporting USAID Forward, and 2) institutional development support to partner SMEs directed at building their MIS to manage client and supplier databases.

Activity 3.3.1 Directed human and institutional capacity development.

Activity 3.3.2 Support to MIS of SME partners specifically focused on sales, costs, and client and supplier database management.

LOP Objectives (indicator targets)

- Six local organizations are strengthened for direct contracting with the USAID/Kyrgyz Republic - USAID Forward component.
- SME partners are equipped with basic IT support to enable them to manage their client and supplier database, thereby improving the efficiency of their sales and operations record systems.

A. ACTIVITIES, OUTPUTS, MILESTONES, AND TIMELINES

Table 36: GANTT Chart for Human and Institutional Capacity Development Activities

#	Activities	FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
3.3.1	Directed human and institutional capacity development (HICD)																						
	Develop selection criteria to select local private sector organizations																					Selection criteria is approved by COP	
	Adapt organizational capacity assessment tools																					Tools are revised and approved by COP	
	Identify potential local private sector organizations to be considered for directed human and institutional capacity development																					Up to six local organizations identified for support	
	Conduct organizational capacity assessments (OCA) of selected private sector organizations and analyze the results of OCA																					Written reports on the OCA	
	Develop practical Capacity Development Plans and PPP agreements																					Grant Agreements with three to six organizations signed	
	Implement the PPP agreement/capacity development plan																					Milestones achieved based on the Grant Agreements	

[illegible]

B. RISK ANALYSIS AND MITIGATION PLAN

Table 37: Risk Analysis and Mitigation Plan for Human and Institutional Capacity Development Activities

#	Activity	Deliverable	Risks	Mitigation Plan	Responsible Staff
3.3.1.1	Directed human and institutional capacity development (HICD)	Up to six local organizations strengthened towards for direct contracting with USAID/KR	Risk of withdrawal of selected local organizations from the USAID Forward component due to various reasons (e.g. change of leadership, management etc.)	Signing of a Public-Private Partnership Agreement with selected local organizations	HICD Manager Grants Department
3.3.1.2	Organize cross-learning conferences for selected organization	Two conferences organized	Risk of not full / partial attendance by participants	Select important / interesting topics for discussions with lunch and coffee breaks	HICD Manager Operations Department
3.3.2.1	Support to MIS of SME partners specifically focused on sales, costs, client and supplier database management	50 SMEs received support to improve their MIS	Risk of SMEs may become too busy with their core business operations to bother about additional e-data collection and MIS	Demonstrate benefits of recording, monitoring and analyzing data from business operations and sales, which can lead to improved, information-based, 'right' business decisions	HICD Manager / STTA M&E Director
3.3.2.2	Procure tablets to selected SMEs and programming of database and information analytical tools in the tablets.	50 tablets are bought and necessary software installed.	Risk of procurement of technically 'weak' tablets, which may create issues during installment of necessary software and use of tablets.	Identify detailed technical specifications of tablets and software requirements with IT Manager and Procurement Specialist.	HICD Manager M&E Director IT Manager Procurement Specialist
3.3.2.3	Train SME partners in the use of the tablets and the MIS system.	Selected SME representatives are trained and use the MIS system daily.	Risk of loss of important data/information due to various reasons (physical damage to tablets, failures in software update, data transfer).	Additional trainings/consultations on potential technical issues with copying/sending data/information files and proper backups (external hard-drives, cloud systems etc.).	HICD Manager / STTA M&E Director IT Manager

3.3.2.4	Agro Horizon Project receives and analyzes information sent by SMEs and provides TA to further improve the competitiveness and expand businesses of SME partners	Partners are submitting e-data on client and supplier database and reporting on sales, cost and other relevant indicators. SMEs improved/optimized their business processes and become competitive	SMEs may become too busy with their core business operations to bother about additional e-data collection and MIS.	Demonstrate benefits of recording, monitoring and analyzing data from business operations and sales, which can lead to improved, information-based 'right' business decisions	HICD Manager M&E Director
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RESOURCES NEEDED FOR TASK 3

Table 38: Resources Needed for Task 3 Activities

TASK 4 IMPROVE NUTRITIONAL STATUS OF WOMEN AND CHILDREN

Objectives:

- Average Household Dietary Diversity Score increased by 10 percent
- Increased knowledge among farmers of diet diversity, nutrition needs for first 1,000 days, sanitation and hygiene
- Advisory and business service providers and producer groups are appropriately integrating nutrition messages into agriculture activities

SUBTASK 4.1 INTEGRATE APPROPRIATE NUTRITION MESSAGING INTO AGRICULTURE ACTIVITIES

A. KEY ISSUES

The most recent Demographic Health Survey (DHS 2012) found that 18 percent of children under age five were stunted, and United Nations (UN) research reports that nearly one in every four deaths of young children in the Kyrgyz Republic is due to underlying nutrition problems. Women and children are particularly vulnerable to poor nutrition, with the key period being the first 1,000 days from conception (PMNCH, 2012). Within Task 4, Agro Horizon focuses mainly on these beneficiaries.

Preliminary baseline research by Agro Horizon shows that the Women Dietary Diversity Score is not low in the project's ZOI. A score of five out of 12 food groups is considered low. In the ZOI, the highest score is 8.4 in Batken and the lowest is 6.8 in Naryn. However, according to the WHO, Kyrgyzstan is in the severe category with regard to anemia. The impact of the lack of iodine on brain development is quite severe, particularly during pregnancy when children's brain cells are formed.

The main target group for the project are smallholder farmers, most of whom live in rural and remote area to provide sustainable supply of safe and nutritious food. Research shows that the diet of the poor households often consists of starchy foods lacking nutrients necessary for proper growth and development of children. Micronutrient deficiencies reflect the lack of variety in the diet and a low consumption of animal products (particularly important for iron against anemia) as well as large seasonal variations in the intake of vegetables and fruits.

The Kyrgyz people typically consume less fruits and vegetables especially during the winter.

Gender consideration

Fruits, vegetables, and berry production are primarily a women's task and has a great deal of potential for increasing women's income. However, the project must bear in mind women's time and labor constraints. Home economics training will be integrated through ABSPs agricultural activities and raise awareness of issues on proper budget allocation for diversified diets and sanitation and hygiene. Spouses, husbands and

wives together will be encouraged to take part at these trainings to have an opportunity to budget and analyze expenses and women time-consuming labor.

Youth consideration

Fruits production, which is less time consuming, tends to be divided between men and women and to involve more youth for spraying and pruning processes.

B. STRATEGY

Agro Horizon is promoting nutrition-sensitive agriculture by focusing on increased productivity of nutrient dense crops and animal products and by making them more available during the winter through increased winter milk production and use of greenhouses for vegetable production.

By focusing on livestock dairy and meat, fruits and vegetables value chains development, the project will contribute to improving access to nutritious food sources by making these nutritious foods more available. Additionally, increase in farmers' incomes due to increased productivity and sales, allows them to buy more food for their families.

Among the nine main food groups, Agro Horizon works on the following six that are **bolded**:

- grain, **tubers**, roots
- **flesh meat** (beef, pork, chicken, fish etc.)
- **dairy products** (milk, cheese, yogurt etc.)
- legumes (beans, peas, lentils, nuts)
- eggs
- organ meat (liver, heart, kidney etc.)
- **dark green vitamin A rich leafy vegetables**
- **vitamin A rich fruits and other vitamin A vegetables**
- **other fruits**

While Agro Horizon works to increase access to more nutritious food, acquired taste and dietary habits that favor a higher carbohydrate intake can be a barrier to diversifying diets. There is a need to educate rural households on the importance of a more diverse diet for better nutrition and good health. Simultaneously, in order to maximize the benefits from improved nutrition, hygienic and sanitary practices also need to be improved to prevent, in particular, the incidence of diarrhea. In order to promote improved diet diversity in light of improved availability of more nutritious food, Agro Horizon will carry out intensive messaging focused on:

1. Health benefits of a more diverse diets namely, different food groups and their respective functions
2. Hygienic and sanitary practices for better health

Agro Horizon will continue to partner with the USAID SPRING project, particularly to help disseminate materials and training modules to increase knowledge among farmers of diet diversity, nutrition needs of infants during the first 1,000 days, and sanitation and hygiene.

In 2017, Agro Horizon will continue to incorporate SPRING project's "Dietary Diversity" module and cookbook into all agricultural trainings. An emphasis will be made on promoting dietary diversity and home economics trainings through Task 1 and Task 2 partner organizations.

Nutrition messages will be promoted through trainings on “Home Economics”. Research revealed that there’s a strong positive association between women’s participation in decision-making (indication of empowerment) regarding household purchases and higher dietary diversity. Women who participate in final decision-making are almost two times more likely to achieve higher dietary diversity compared to those who do not participate in household decision-making. These results suggest that women’s decision-making autonomy at the household level is crucial for the consumption of diverse diet.

The following key messages will be incorporated:

- When changes in agricultural production lead to increases in household income, the income can be used to purchase goods or ingredients to diversify diets that affect health status.
- Where changes increase the returns to time spent in agriculture, households may increase the amount of labor they devote to care for the children and family (often particularly applicable in terms of women’s time allocated to care).
- Changes in agricultural production may result in changes in the allocation of resources within the household. If this change results in women earning greater income, or she participates in decision making at the household level then this may affect how households spend money, how food is allocated, and the types of assets that are accumulated. Holding all other factors constant, this may improve health and nutrition.

Meal expenses take the highest portion of a rural household budget. Unfortunately, many households frequently lack enough income to cover all family expenses. Nutrition suffers accordingly. Task 4 team has developed a home economic training module that will empower households to develop household financial plans that allocate a budget for purchase of nutritious food for the family especially for pregnant women and children.

The project will carry out training on technologies for drying, freezing fruit, souring, pickling vegetable and root crops to reduce food losses. Another natural branch of this is to promote root cellars for storage of fresh fruits and vegetables for home consumption during the winter for better food security and nutrition.

C. OBJECTIVES (LOP INDICATOR TARGETS)

- Average Household Dietary Diversity Score increased by 10 percent
- In FY17 & FY18 a total of 28,000 farmers increased their knowledge of diet diversity, nutrition needs for first 1,000 days, sanitation and hygiene
- Advisory and business service providers and producer groups appropriately integrate nutrition messages into agriculture activities

Table 39: Indicator Targets for Nutrition Messaging in Agricultural Activities

Indicator	FY 17 Target	FY 18 Target	FY 17 & 18 TOTAL
Number of individuals trained	18,000	10,000	28,000
Number of households benefitting from USG assistance	9,000	5,000	14,000

Tasks 1 & 2 are developing the livestock, fruits and vegetable value chains. Task 4 will carry out nutrition messaging among the beneficiaries of Tasks 1 and 2. Agriculture and nutrition are linked along the food value chain. Project interventions are expected to make nutritious foods more available in the areas where they are produced. This availability is expected to encourage consumption of these more nutritious food. Additionally, beneficiary incomes are also anticipated to increase with the increase in productivity of farms. To ensure that a portion of the increase in incomes is set aside for the improvement of the household's diet diversity, the Agro Horizon project will carry out home economics training, which will focus on budgeting and ensuring allocation for nutritious food procurement.

D. ACTIVITIES, OUTPUTS, MILESTONES, AND TIMELINES

Activity 4.1 Mainstreaming messaging in activities of Tasks 1 & 2

To ensure that nutrition messages are mainstreamed, Task 4 team will review all grant agreements to ensure that nutrition activities are included in the deliverables under the grant agreement where appropriate. Task 4 team will participate in kick-off meetings or facility launching to ensure that nutrition materials/leaflets are distributed.

Activity 4.2 Development and dissemination of nutrition promotion materials

Agro Horizon will build on SPRING materials to develop simple nutrition promotion materials that discuss the benefit of eating a diverse diet particularly focusing on nutrient-dense food such as fruits and vegetables. These materials will also cover hygiene and sanitation, home economics and various ways of ensuring a balanced diet for the family, including kitchen gardening. Partner SMEs, village health committees and other interested organizations will serve as platform for the dissemination of these materials.

Materials that have been developed in Project Year 2, such as the cookbook, will be multiplied to cover new project beneficiaries.

Activity 4.3 Nutrition training and messaging

In order to not duplicate and to optimize USG investment in nutrition messaging, the Agro Horizon project will focus messaging in Oblasts in its ZOI that are not covered by the SPRING project. In addition to mainstreaming nutrition messages in trainings conducted by ASPs, the Agro Horizon project will announce a tender on nutrition messaging service providers: selection will be done among women entities, freelance trainers, or village health committees and NGOs under the alliance of healthy nutrition. Trainings of trainers or key

messengers will be carried out to ensure that there is a pool of messengers that discuss the nutrition messages among farmers.

Activity 4.3 Cooperation with other projects and organizations

Agro Horizon will continue to work closely with the SPRING project, especially in disseminating or multiplying relevant materials developed by SPRING.

Agro Horizon will also collaborate with SUN Alliance as it targets to expand nutrition sensitive agriculture approach in KR. Task 4 will take part at its events, workshops, and assessment working groups to represent Agro Horizon on the national level.

Table 40: GANTT Chart for Nutrition Messaging in Agricultural Activities

#	Activities	FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			Milestone
		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	
4.2	Develop and disseminate nutrition promotion materials																						
	Develop promotion materials																					Promotion materials developed	
	Get approvals from MOH and piloting materials among beneficiaries																					Materials are approved by Ministry of Health and are piloted	
	Print and disseminate materials																					Materials are disseminated to target beneficiaries	
4.3	Training of trainers/ messengers																						
	Select and contract master trainers and freelance trainers																					2 master trainers and 100 freelance trainers hired	
	TOTs on home economics and dietary diversity																					100 trainers trained	
	Messaging in ZOI on dietary diversity and home economics																					18,000 individuals trained	
	Messaging in ZOI on dietary diversity and home economics																					10,000 individuals trained	
4.4	Cooperation with other projects and organizations																						
	Cooperate with SPRING project																						
	SUN alliance collaboration																						
	Conferences and seminars on nutrition sensitive to agriculture																						

E. RISK ANALYSIS AND MITIGATION PLAN

Table 4I: Risk Analysis and Mitigation Plan for Nutrition Messaging in Agricultural Activities

#	Activity	Deliverable	Risks	Mitigation Plan	Responsible Staff
4.1	Mainstream messaging in activities of Tasks 1 & 2	At least 28,000 farmers received messages from AHOP supported sources	Partners might be too busy with production activities to provide time for nutrition messaging	Provide to partners easy to distribute visual materials demonstrating the benefit of balanced diet; include in grant agreement as appropriate	Task 4 & Task 1 Dzhypar Erge-shbaeva , nutrition manager
4.2	Develop and disseminate nutrition promotion materials	Nutrition materials are developed and disseminated	Materials may not be that effective in changing diet habits.	Materials will be tested and improved as necessary	Task 4 & 1 Aijamal Ypyshova Nutrition Coordinator
4.3	Training and messaging	17000 of individuals improve their knowledge of nutrition	Lack of interest from farmers to engage in this activity	Provision of honorarium to trainers and also conduct of innovative activities like cook out	Task 4 Dzhypar Erge-shbaeva, Nutrition Manager Aijamal Ypyshova Nutrition Coordinator

RESOURCES NEEDED FOR TASK 4

Table 42: Resources Needed for Task 4

TASK 5 CROSSCUTTING FUNCTIONS

SUBTASK 5.1 GENDER AND YOUTH CONSIDERATIONS

Objectives:

- Bottlenecks and opportunities identified to optimize the contribution of women, men and particularly youth in the target value chains
- Women and men equally benefitted from Agro Horizon's interventions through selected VC
- Young farmers, entrepreneurs and advisors given preferential option in selection of beneficiaries and SMEs
- Project studies, including sector study, base/end line studies, annual surveys are gender disaggregated

Gender analysis

With the selection of new value chains for the PY 3 and 4, the project will carry out a gender analysis of the milk, meat and livestock value chains so that women and men can equally benefit from project activities on increasing winter milk production, better livestock health management, proper feeding practices and learning artificial insemination. Additionally, the project will analyze gender roles and opportunities for both men and women in other value chains, namely, fresh and dried fruits and berries, kitchen gardening, potato and fodder crop production, and nurseries. The project will develop a methodology to conduct the analysis, collect data and analyze it for proper planning of gender mainstreaming activities in the value chains.

Value chain development

According to the national statistics, women take up at least 40 percent of the labor force in agriculture in Kyrgyzstan. However, the SME assessment reveals a very low women to men ratio in the ownership and management of SMEs and large agribusinesses especially in the four focus oblasts of the project. Hence, the project will focus on strengthening women entrepreneurs, managers and leaders in agribusinesses in the project's priority value chains and focus oblasts. The Women Agro-Enterprise Development Specialist (WAEDS) will focus on providing support to improving the profitability of agribusinesses owned and/or managed by women entrepreneurs/managers.

Women predominately run production of fresh and dried fruits, berries and vegetables, dairy products, and are laborers in larger crop production and processing activities. The project will provide a preferential option to grant applications/proposals that specifically support activities that strengthen women and youth leadership and contribution to the growth of the project's priority value chains. To ensure this, the following will be done:

1. Grant applications with focus on empowering women and youth will be given preferential treatment
2. All grants will be routed to the gender mainstreaming manager for her to ensure that M&E requirements include sex and age disaggregated data

3. All studies and survey SOWs and tools will be routed to the gender mainstreaming manager for her to ensure that gender and youth concerns are considered appropriately
4. Together with the communications team, the WAEDS and the gender mainstreaming manager will aim to develop at least eight success stories involving women in the last two years of the project.

Strengthen advisory service industry / HICD

One of the biggest problems the gender audit revealed was the lack of M&E systems in the advisory service industry. Almost none of the eight organizations audited in Year 2 use monitoring and evaluation systems in their work to report on how many women and men these extension agencies have trained and supported since their establishment. That makes it impossible for them to predict the exact number of female and male farmers that are engaged in a certain value chain or industry. The project proposes to update existing M&E reporting system or introduce and train the partnering organizations on maintaining proper records on number of people trained. Numbers will be disaggregated by gender, administer pre- and post-tests on effectiveness of certain interventions or quality of applied methods for female and male farmers, and help them to analyze and draw recommendations for future planning.

Within larger HICD activities, gender considerations were included into the OCA tool and diagnosis of one of USAID forward organizations. Using the same tool and lesson learned, the remaining five organizations will also be assessed on gender sensitivity. More SME partners will be equipped with basic IT support, including sex-disaggregated data collection capacity that will be analyzed per value chain and used to make better forecasting and planning decisions.

In addition, the project will increase the understanding of partner organizations on gender equality and equity. The project will provide add-on trainings on gender via ASP capacity building activities.

Table 43: Resources Needed for Gender and Youth Activities

Table 44: GANTT Chart of Gender and Youth Activities

#	Activities	PY2016					
		A	S	O	N	D	Milestones
1	Work plan with methodology, sampling, timeframe of fieldwork, and tools						Work plan for gender analysis discussed and finalized with COP/HQ
2	Desk study						Preliminary findings and summary drafted
3	Development of methodology and tools						Analysis methodology submitted for approval
4	Approval of all tools, methods, and costs						Methodology and tools discussed and approved with COP/HQ

5	Recruiting and training four local STTAs					Four local STTA contracted
6	Arranging required meetings					Meetings are arranged over phone, email and partnering ASPs
7	Interviews and focus group discussions					All interviews, focus groups, key informant interviews are conducted
8	Consolidating all data					Collected data analyzed
9	Drafting conclusions and writing report					Analysis reflected into report and conclusion
10	Presentation					Findings presented to project staff

SUBTASK 5.2 MONITORING AND EVALUATION

M&E activities will continue through the LOP, including output indicators tracking, routine monitoring activities, annual and end-of project surveys, and outcome and impact studies.

The PY2 annual report results will be presented and discussed with the project task managers in the first quarter of PY3. This report will include the results of the PY2 annual beneficiary survey that reveal the outcome indicators' results. In the second quarter of PY3, a study will identify the results of the following indicators: 1) gross margin, 2) incremental sales and 3) number of farmers and others who have applied improved technologies/practices. The study will be conducted Agro Horizon M&E team jointly with potential contractor or enumerators and the results will be used to improve the project implementation process.

The M&E team will conduct routine data collection, data analysis, and reporting on output indicators by Task teams and partner organizations. The M&E team will support project management and partners with training sessions and coaching on data collection strategies. Output data will be tracked in the online SharePoint database system that includes weekly tracking through the Learning, Evaluation, Analysis, Platform (LEAP). Routine data collection and monitoring activities will include participating in interventions, surveying them at the end, spot check visits, reviewing the task managers' reports and records, and other data collection and observation methods.

The M&E team collects qualitative data and reporting as a learning part of the M&E system. Qualitative data will be collected through in-depth interviews and focus group discussions with the project stakeholders. Findings will be used to inform management decisions and project communications.

The project beneficiary data will be gathered as much as possible through electronic data collections methods. Paper-based data collection will be used only where e-data collection is not feasible due to time limitations. All data recorded in the SharePoint database will be summarized in a dashboard to be used for analysis and reporting purposes.

Activity 5.2.1 Routine M&EL activities

- Conduct at least one spot check for the implementing activities either by phone-call and/or field visit
- Support implementing organizations with M&E sessions during kick-off meetings, coaching on conducting monitoring of the scheduled activities, completion of M&E forms, and drafting report deliverables

- Provide all necessarily M&EL (M&E, Learning) data to the Agro Horizon project management for the monthly, quarterly and annual reports
- Enter beneficiary and other data to the SharePoint database using additional support e.g. interns or other data encoders

Activity 5.2.2 Outcome data related activities

- Provide data for drafting the monthly and quarterly reports from the database and other M&E records
- Work with the PY2 and PY3 annual beneficiary survey results with the project task managers and present to the project managers in October 2016 and 2017
- Develop and conduct gross margin, sales, and technologies applied indicators study in the second quarter of the PY3 using e-data collection methods. Develop and conduct gross margin, sales, and technologies applied focused indicators studies during the PY4 in cooperation with the Agro Horizon technical team. Present and discuss the results of the gross margin, sales, and technologies applied focused indicators study results during the final PY
- Present and discuss the results of the gross margin, sales, and technologies applied focused indicators study results during the PY3
- Develop, conduct, and presents the results of a qualitative study with the project stakeholders through the IDIs and FGDs
- Support the development of success stories and lesson learned with the communications and gender specialists every quarter
- Conduct an internal project review and learning with partners and stakeholders in the second and fourth quarter of the PY3 and the last quarter of PY4
- Conduct the PY4 annual beneficiary study together with the partner research company

Activity 5.2.3 Data quality assurance

- Participate in the internal data quality assessment conducted by the ACDI/VOCA HQ M&E office in the first quarter of the PY3 and PY4
- Follow-up the IDQA findings with the M&EL team members with particular attention at the end of the project so that project data will be archived appropriately
- Develop materials/tools of the mid-term assessment and end line evaluation and assist the contractor with the implementation
- Update the PIRS (Performance Indicators Reference Sheet) in August and September, 2017 if/when needed

Activity 5.2.4 Other M&E related activities or task

- Improve e-data collection system and data storage
- Train partners and field project managers on data e-collection methods including GIS mapping
- Present the results of the project to the project management and the stakeholders
- Work on project wrap-up activities together with the project managers
- Work on legacy of Agro Horizon project together with the project technical team and the partners

- Assist with the final close-out event in the last quarter of the PY4

Table 45: GANTT Chart of Monitoring and Evaluation Activities

#	Activities	FY17 Q1			FY17 Q2			FY17 Q3			FY17 Q4			FY18 Q1			FY18 Q2			FY18 Q3			FY18 Q4			Responsible Person(s)
		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	
1	Routine monitoring and data collection (output indicators)																									Agro Horizon team in coordination with Agro Horizon staff and partners
2	Outcomes data collection (annual survey)																									Agro Horizon team with external enumerators
3	Quarterly reporting and Success Stories																									Agro Horizon M&EL team in coordination with COP & DCOP
4	Annual report and annual work plan preparation																									Agro Horizon team in coordination with COP & DCOP
5	PMEL plan update including PIRS																									Agro Horizon M&E and project managers
6	Database and MIS improvement; e-data collection																									Agro Horizon team with HQ IT specialist
7	Mid-term evaluation																									Contractor of AHOP with M&EL team support
8	Mid-term evaluation workshop sharing and learning																									Agro Horizon project management and its contractor
9	Internal project review and learning with partners and stakeholders																									Agro Horizon team in coordination with Agro Horizon staff and partners
10	Routine data quality spot check visits																									Agro Horizon team
11	Qualitative studies; FGDs, IDIs etc.																									Agro Horizon project MEL team
12	Internal data quality assessment																									HQ Senior M&E Director
13	Impact evaluation (End line study)																									Contractor of Agro Horizon with MEL team support

Major events will be attended by high level officials from both the U.S. and Kyrgyz Republic governments (i.e., The U.S. Ambassador and the Prime Minister), increasing public awareness of USG support.

A sample of major events includes:

- Annual stakeholder roundtables to share the project's lessons from previous year and plans for the coming year
- 10-12 Facility inaugurations (Agro-processing/logistics complex, slaughterhouse in Naryn, frozen french fry processing facility in Osh, feed manufacturing and laboratory in Osh, logistics processing center in Batken, juice puree processing plant, plum drying facility, apricot sorting and drying facility in Batken)
- Launch of market information system (MIS) tentatively in June FY17
- Project closeout event

Activity 5.4.2 Reporting

Strong internal and external reporting structures promote accountability and strengthen program management. The Communications team will adhere to the reporting calendar to compile, edit, and submit USAID Agro Horizon deliverables on time.

- The Communications team will assist to compile, edit and submit weekly reports, weekly news reports, quarterly reports and annual report to USAID in a timely fashion
- The Communications team will coordinate with the M&E team to ensure that accurate data is reported

Activity 5.4.3 Marking and branding communication materials, reports, events and project sites

The marketing side of communications helps to improve external communications through the production of easy-to-read and understandable products and well-branded materials.

- USAID-branded signage will be developed for specific conferences, workshops, etc. as required
- USAID updated Branding & Marking Guideline will be implemented
- An updated one-pager on USAID AHOP Fact Sheet will be developed and updated every six months
- The Communications team is responsible for ensuring that every work site has the proper signage, and that each sign is branded with the activity and USAID Agro Horizon Project's name
- The Communications team will ensure that all project staff and implementing partners understand project messaging, including the underlying message that this is aid from the American people

Activity 5.4.4 Project information systems strengthening

- Ensure that essential information from reports is packaged and properly disseminated to internal and external parties
- Conduct follow-up on on-site monitoring visit forms with activity managers. Interview beneficiaries and implementing partners to recognize potential success stories, case studies, best practices, and lessons learned

Activity 5.4.5 Knowledge management

- Package all STTA and internal reports approved thus far for possible printing and uploading to the Development Experience Clearinghouse (DEC), ensuring proper marking and branding and USAID approval

- Organize STTA exit presentations as knowledge-sharing events and invite relevant shareholders
- Create an internal bibliography of all publications with a search-and-find mechanism (i.e. tagging) to help ease the manner in which we find items on and offline
- Carry out at least one knowledge-sharing activity to share lessons learned from USAID Agro Horizon program implementation

Table 47: Resources Needed for Communications and Learning Activities

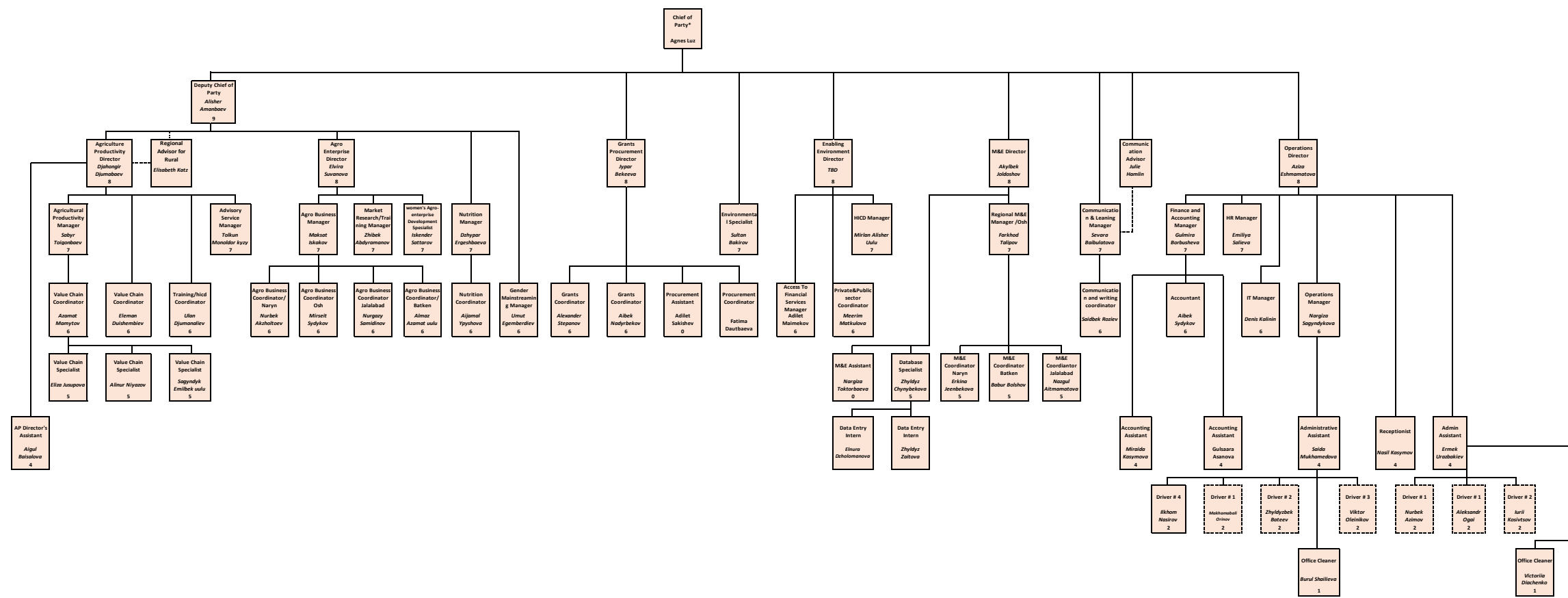
SUBTASK 5.4 ENVIRONMENTAL COMPLIANCE

USAID environmental compliance procedures will flow down to all Agro Horizon funded activities. Therefore, Agro Horizon will ensure that adherence to Reg. 216 is incorporated into all grants and sub-agreements. In fulfilling the environmental compliance requirements, the project Environmental Compliance Specialist will continue to monitor ongoing projects for compliance with Environmental Mitigation and Monitoring Plans (EMMP) as well as host country regulations.

The focus for years 3 & 4 will be placed on development of detailed Environmental Review Checklists and EMMP's for activities in meat and dairy sector. This will include regular field monitoring across the selected value chains and trainings on food safety standards, workers' safety, use of PPE and personal hygiene. The Agro Horizon project will promote environmental sound management at partners and beneficiaries' facilities that consequently would improve their competitiveness on export markets.

ANNEXES

ANNEX I : ORGANIZATIONAL CHART



ANNEX 2 : ANTICIPATED LEVEL OF EFFORT

Position	Short/Long Term	Local/Expatriate	Anticipated LOE (days)
Chief of Party	Long Term	Expatriate	235
Agro Enterprise Director	Long Term	Local	235
M&E Director	Long Term	Local	235
Accounting & Finance Manager	Long Term	Local	235
HR Manager	Long Term	Local	235
IT Manager specialist	Long Term	Local	235
HICD Manager	Long Term	Local	235
Environmental Specialist	Long Term	Local	235
Database officer	Long Term	Local	235
Operation Director	Long Term	Local	235
Accounting Assistant	Long Term	Local	235
Procurement Coordinator	Long Term	Local	235
Procurement Assistant	Long Term	Local	235
Administration assistant	Long Term	Local	235
Receptionist	Long Term	Local	235
Private & Public sector Coordinator	Long Term	Local	235
Communication and Learning Manager	Long Term	Local	235
Grant coordinator	Long Term	Local	235
Procurement and Grant Director	Long Term	Local	235
Financial Services Manager	Long Term	Local	235
Deputy Chief of Party	Long Term	Local	235
Agro Enterprise manager	Long Term	Local	235
Nutrition manager	Long Term	Local	235
Gender Mainstreaming Manager	Long Term	Local	235
Operation manager	Long Term	Local	235
Administration assistant	Long Term	Local	235
Nutrition coordinator	Long Term	Local	235
Agribusiness Coordinator	Long Term	Local	235
Grant coordinator	Long Term	Local	235
M&E Coordinator	Long Term	Local	235
Accountant assistant	Long Term	Local	235
Regional M&E Manager	Long Term	Local	235
Agribusiness Coordinator	Long Term	Local	235
Agribusiness Coordinator	Long Term	Local	235
Market Research/Training Manager	Long Term	Local	235

Women's Agro Enterprise Development Specialist	Long Term	Local	235
Project Communication and Writing Coordinator	Long Term	Local	235
Accounting assistant	Long Term	Local	235
Agro Business Coordinator	Long Term	Local	235
Agriculture Productivity Director	Long Term	Local	235
Assistant of Agricultural Productivity Director	Long Term	Local	235
Advisory Services Manager	Long Term	Local	235
Agricultural Productivity Manager	Long Term	Local	235
Value Chain Coordinator	Long Term	Local	235
Value Chain Specialist	Long Term	Local	235
Value Chain Specialist	Long Term	Local	235
Value Chain Specialist	Long Term	Local	235
Value Chain Specialist	Long Term	Local	235
M&E Coordinator Batken	Long Term	Local	235
Value Chain Coordinator	Long Term	Local	235
M&E Coordinator	Long Term	Local	235
Communications Specialist	Short Term	Expatriate	108
Supply base (milk & beef farm productivity improvement through learning centers, training and other farm based interventions)	Short Term	Expatriate	32
Supply base (milk & beef farm productivity improvement through learning centers, training and other farm based interventions)	Short Term	Local	48
Supply base development (farm productivity improvement, service provider establishment, primary processing and access to inputs)	Short Term	Expatriate	100
Support to Fruit Nurseries	Short Term	Expatriate	20
Greenhouses (building on the Task 4 work in FY16) – commercial and smaller ones	Short Term	Local	100
Milk Processing and collection center improvement	Short Term	Local	80
Milk Processing and collection center improvement	Short Term	Expatriate	20
Slaughter house & meat processing improvement	Short Term	Local	60

Slaughter house & meat processing improvement	Short Term	Expatriate	20
Consolidation centers community based	Short Term	Local	66
Logistics Center	Short Term	Expatriate	40
Processing (juice, puree, dried, jam, etc)	Short Term	Expatriate	40
Processing (juice, puree, dried, jam, etc)	Short Term	Local	100
Integrated business operation potentially in frozen french fries by a lead firm	Short Term	Expatriate	30
Marketing Support (training, product development, packaging, labeling, trade fairs, etc.)	Short Term	Local	100
Business development support (SMEs and ASPs)	Short Term	Expatriate	100
BEE (policy forums including discussion on market access)	Short Term	Expatriate	17
Institutional support to government (STTA, training & laptops/tablets- contingent on bilateral agreement)	Short Term	Expatriate	100
HICD support to international standards accreditation/certification	Short Term	Expatriate	50
HICD support through e-data management of businesses of up to 60 SMEs	Short Term	Local	80

ANNEX 3 : YEAR THREE AND YEAR FOUR WORK PLAN BUDGET

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